

THE MICHIGAN FARMER,

A WEEKLY JOURNAL OF AFFAIRS

Relating to the Farm, the Garden, and the Household.

NEW SERIES.

The Michigan Farmer,
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The Farm.

On the Structure and Properties of Wool.

The property of "crossing" considered, and practically demonstrated.

BY HENRY GOADBY, M. D., F. L. S.
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Continued from page 88.

The reader is desired to remember that all these wools have been magnified 500 times—in other words each wool is 500 times less than figured. A son of "Old Seventy," figure 35, does not seem to bear investigation so well as other good breeds already figured; the

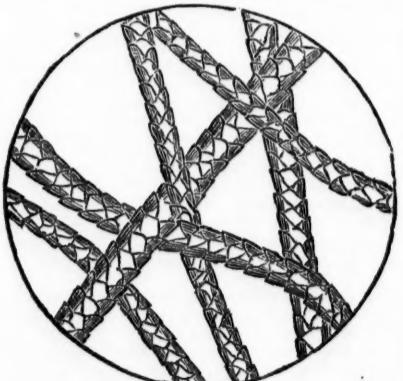


Fig. 35. Wool from the son of "Old Seventy," a Saxon buck of Ohio.

hairs are straight with one exception, but there is so much disparity of size in them as to lead to a suspicion that he is not entirely pure. Another Saxon ewe, also bred in Michigan, is represented in figure 36; this specimen is as fine as any that have preceded it.

The French wools when pure compare favorably with any that can be brought against them, the difficulty is to find them pure; the flock of one breeder appears to be a great exception to this rule, as the French wools which he has bred are superior to the import-

ted stock from which they came. In justification of this statement the reader is referred to figure 12, for a specimen of a pure French Merino buck, imported, and in figure 37 a representation is given of wool raised, either

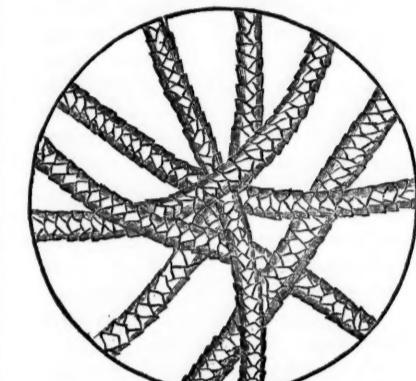


Fig. 36. Wool from a Saxon ewe bred in Michigan.

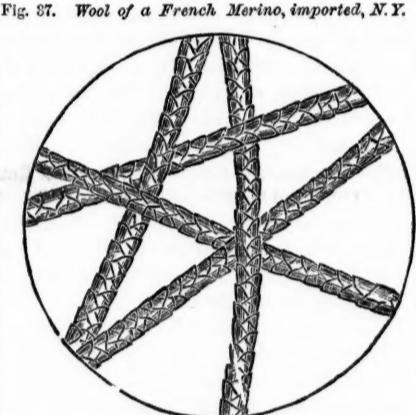
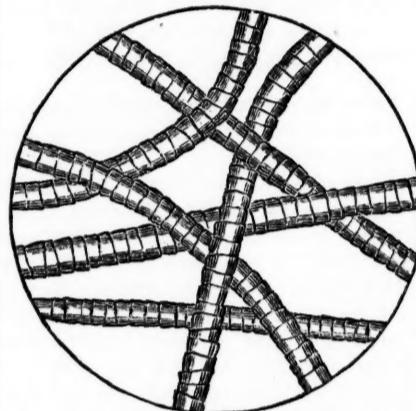


Fig. 38. Wool of a French Merino imported, N.Y.

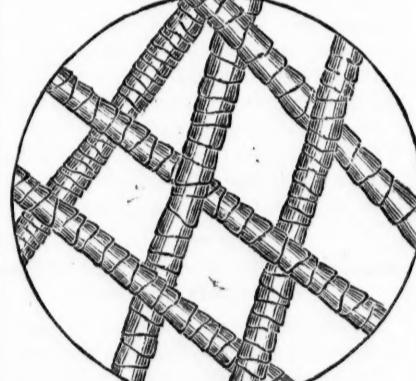


Fig. 39. Wool of a pure Silesian ewe bred in Ohio.

less than one square, while they, too, have hairs of larger diameter; the pure-blooded ewes, bred in this country, are finer, and more uniform than the imported stock, and one of them the best has been selected for illustration (figure 39); but even these are not free from the objection alluded to. These irregularities seem to indicate a transition state—they have not sufficiently recovered from the "cross" in which the variety originated, an opinion that is confirmed by the appearance of two specimens forwarded, three-fourths Silesian and one-fourth Saxon; (figure 28 well represents them, although taken from another specimen.) The cross of Silesian with Saxon scarcely shows at all, but with French and Spanish it is most conspicuous.

The felting property of Silesian wools is quite remarkable; the scales of imbrication number 100 on some hairs, on others 150; other hairs present 200, and occasionally a hair is found with 300 to the inch!

Eventually, the Silesian may become a fine wool, but it never can surpass, if it equal, such perfect specimens of Saxon wool, as shown in figures 31, 33, and 34. The surprising uniformity of size in these wools is truly wonderful.

A remarkably interesting contribution has just been received from Mr. Richard Peters, of Atlanta, Georgia: this gentleman is the fortunate possessor of a number of specimens of the Cashmere or Thibet goat, and he has obligingly sent specimens of wool from these animals for the purpose of examination, and to aid the enquiry now in progress relative to the "Structure of wool." The following specimens have been received:

Sample of the fleece of a one year old Cashmere buck of pure breed.

Sample of the fleece of a 2 year old one-half breed, its sire a Cashmere buck, its dam a native goat.

Sample of the fleece of a 1 year old $\frac{3}{4}$ breed.

Sample of the fleece of a 1 year old $\frac{1}{2}$ breed.

The first sample, taken from a buck of pure breed, is without exception, the most beautiful wool the author ever gazed upon! Of a pure dazzling white, lustrous, delicately soft to the touch, and silky, beyond the power of expression; added to which it is $8\frac{1}{2}$ inches long. The microscopical examination justifies the anticipation of unassisted vision, for surely a more interesting and beautiful sight was never seen. The hairs range in diameter from a trifle less than one square of the micrometer, to two squares; and these do not suddenly and violently, but gradually and insensibly: some measure a fourth over one square; others are a square and a half; another, is one square and three quarters; and lastly, two squares of the micrometer are attained—beyond this it does not extend.—The largest hairs of this remarkable goat, are finer than the Southdown sheep; only half the size of the Leicester, and certainly not any larger than the finest of the Cotswold.

The smallest hairs are positively finer than ordinary Saxon wool—extraordinary, such as figures 31, 33, and 34, are a little finer. But what a great number of specimens of wool, and good, and excellent wool, have lately been examined, every one much coarser than this wonderful goat!

Its felting properties must be no less remarkable; not a single hair was seen with less than 75 imbrications to the inch; some hairs had exactly 100; some 150 (the average number of the best Saxony wools); whilst others had no less than 200 to the inch! The number of imbrications is not restricted to hairs of any particular size; sometimes one of the smallest hairs has only 100, while a larger one has 200; then a smaller one has 150 or 200, and a large one only 75—the smallest number seen. By this arrangement the felting must be of the highest order of excellence. What a magnificent sight the "finer, under fur," must present, and how much to be deplored is it that the climate of this country is not cold enough to produce it!

One could dwell with delight on this theme for a much longer space, but must hasten to satisfy the reader's wants in relation to the "cross" breeds.

So much has been said and demonstrated on this subject, in relation to Sheep, that some curiosity will necessarily be excited in connection with cross breeds. The ewes of pure blood, also imported, do not measure

less than one square, while they, too, have hairs of larger diameter: the hair of the male, and of the female, are both distinctly visible, in addition to which there is a general tendency to amalgamation or fusion of the wool of both parents, and this occurs—not throughout the whole length of a hair, but partially—hence the distortions. A hair, for example, may begin of the normal size of the sire; then it simulates the mother's larger wool; then the father's is again imitated; then again the mother; and this continued throughout a hair, gives rise to those unsightly and inconvenient distortions, always found in a wool of cross breed. It is this tendency to fuse, or amalgamate—always attended by exaggeration, that forms the objectionable characteristic of cross-bred wools, so far as sheep are concerned.

The enunciation of this principle, will doubtless lead the reader to expect the same developments in connection with goats; but he is doomed to be mistaken, for notwithstanding that "crossing" damages them at least as much as sheep, yette the plan, or the method of the exhibition of its effects is essentially different. In the goat, there is no tendency to amalgamation, or fusion, but on the contrary, each parent maintains its individuality; that is to say, that the offspring of a "cross" has the distinct hairs of both parents, as perfect, and well defined, as though they were obtained from two different animals.

In the midst of a bundle of hairs, all obtained from the father (Thibet), will be found a number of strong, opaque, very large hairs—evidently of different structure, obtained from the mother; many of them measure as much as eight, and some of them 10 or 12 squares of the micrometer, and while the hairs of the sire are singularly translucent, these gigantic hairs are as black as Erebus! At a glance it must be obvious that, however much the common goat may advantage by association with the Cashmere, the wonderful property, and sterling qualities of the latter, are degraded and lost by this mean association. The disparity of size and structure between the wool of the Thibet, and the strong, unsightly hairs of the common goat is such, that it certainly amounts to a specific difference, and this may account for the inability to amalgamate. The structure of the native (American) goat, will hereafter be given.

(To be continued.)

Now is the time—Hungarian Grass-Barley.

Who is there amongst our readers who has tried the Hungarian grass or Millet? We have some inquiries on that subject from correspondents, who desire to sow a few acres the coming season. These inquiries may be classified and have reference solely to production in this State, as follows:

1. Where can the seed of this plant be procured? and what is its price?

2. How much seed has been found necessary for an acre? and what is the effect of thick and thin sowing?

3. On what kind of soil does this grass succeed the best? Has it been tried and compared on heavy and light soils?

4. What time has been found the most proper for sowing the seed? and what cultivation was found best adapted to it? How does it succeed under heavy or light plowing, and does it yield better when the field is manured, or when it is not?

5. What time has been found the best for cutting it, and what amount of curing does it need?

6. What is its rate of produce in hay or green food per acre, and how does it compare with Timothy, when cured as a hay crop?

7. Will it produce a crop of hay and a crop of seed profitably?

These are the inquiries made relative to Hungarian grass, and now is the time to answer them; more especially as it will soon be necessary to determine whether any part of the farm shall be appropriated to this crop.

To those who want a fall feed on which they can rely, should a drouth cut off the pastures, the Hungarian grass afford a fine resource as a crop which they can cut and feed green to milch cows, as it is unquestionable that it has the property of growing well on light dry soils, and a dry time does not affect

it. Hence a few acres of it which may be ploughed up and sown with winter rye next fall, for early green spring feed, will be found advantageous, especially for those who have a considerable dairy stock.

Has it been settled that barley will be a profitable crop to sow on one of the fields? If it has not yet been decided upon, now is the time to take the subject into consideration. If this crop is considered one which it will be profitable to raise, then it should be decided immediately what piece of the farm is most suitable for it. The maltsters and brewers, who are the chief purchasers of this grain, generally give the preference by a larger price, for barley that is grown in Canada. They give no other reason for this preference, except that the Canadians seem to understand growing this grain, plumper, heavier, and cleaner, than our farmers do, and hence their barley is worth more than ours.

But as there is little difference in the soil, and less in the climate, there is no good reason why Michigan barley should not be grown to as much perfection as that in her majesty's dominions. One of the first conditions of growing a crop of barley, is to secure good seed; and we would advise those who intend to sow this crop, and have not yet procured seed, to attend to that part of their business now; and to make an effort to procure their seed from some of the heaviest samples of Canadian grain that can be found. If grain can be found and cleaned until it will weigh 56 pounds to the bushel, that is the kind to sow, even if it costs something more to buy it than ordinary grain.

The next point to consider is the condition of the field. If the crop is to be put on a piece of old sod that is slightly inclined to clay, and has as yet to be plowed, we strongly advise a re-consideration of the notion to sow that crop on such land as it will not grow to any advantage, and change your mind, and put on oats, or corn, but no barley. On the light soils of the plains and openings, barley should be grown to as great perfection as it could be grown anywhere.—If the field is inclined to be somewhat stiff, but has been used for a corn crop the year before, and has been kept clean, the spring plowing and harrowing will render it fit for a crop that will yield undoubtedly, if the seed is got in with some care. But this is seldom done. For instance, after plowing in the corn stubble, it is usual to put on the drag, and make the soil as smooth as possible with that implement, when the seed is immediately sown. But this is not enough; after the drag has done to such a soil all it can do, the roller should be put on, then follow with the wheat cultivator set so that it will not penetrate over three inches deep, sow the seed at the rate of two to two and a half bushels per acre, harrow lightly with a fine toothed harrow, and again roll. If clover and grass seed is to be sown, they also should be sown after the last harrowing, but before the rolling. This should be the proceeding where the soil inclines to clay, where it has not been plowed in the fall, and where it is desirable to raise a first rate crop.

Where the soil is light, very friable, and rather inclined to be sandy, if the field is a sod, it would have been better to have had the plowing done in the fall, and then the cultivator and the harrow would have done all the work for the spring previous to sowing the seed, but the roller is almost indispensable after the seed is sown. There is no grain that seems to delight more in a mellow, well prepared seed bed than the barley, and if such a bed is not given it, "John Barleycorn" is very sluggish and slow in "getting up," and if he does not get up early, the best part of the season for his growth is lost and cannot be regained. Now, therefore, is the time to lay your plans to secure a crop that will repay you. We have no hesitation in stating in this connection that the judicious use of the roller in the cultivation of this crop, will make a difference of several bushels per acre.

In the late message of the Governor of Georgia he eloquently descants upon the "educational wants" of his State, and among many other facts, he notices "the exhaustion of the soil under a system of agriculture that glories in excluding the application of scientific principles."

Sweet Potatoes—Cultivation and Management.

The sweet potato is here considered to be almost as indispensable as the common sort. My hot-bed, last year, was sixty feet long by ten wide. I design the next spring to enlarge it threefold. My mode is to place logs on a sloping piece of ground say ten or twelve feet apart. I then drive small stakes, or pegs, in rows, three feet apart, and eight inches high. The object is to have not more than seven or eight inches depth of manure, which should be fresh horse-dung, a mixture of hay, straw, corn-fodder, &c., trampled down level with the top of the pegs. I then put a coat of loam, three inches deep, upon the top of the manure, which answers for the dressing the subsequent year. I then place my tubers on, cover them from two to three inches deep, and then lay on boards, so as to keep them effectually covered from rain or cold until the plants are up. During the day, I let them have the sun, until I am sure they cannot be injured by frost. I sometimes water them, but not before the heat has somewhat subsided in the bed, which I ascertain by putting my fore-finger through the covering. A very little warmth from beneath is sufficient; there is more to be apprehended from too much heat than too little. Some place covering of sawdust on top of the bed; but this is unnecessary. In this latitude the beds should be made as early as the 10th or 20th of April. The plant will be ready for drawing from the 8th to the 20th of May.

I select ground, for growing the tuber, that will produce good corn. To manure just before planting, will cause the plants to run to vines. Good loam, with or without sand, such as we call "second year's land," lying to the sun, yields best. It need not necessarily be sandy, to produce the greatest yield; on the contrary, good loamy land produces tubers of the best flavor. I plow the ground well, when dry, and harrow thoroughly. It would even be better to cross-plow it. Then, I throw two "moles" together, about four feet apart, and see that the ground is well pulverised, in order that the list may be clear from clods, sods and trash, and that the land is in the best order to receive the plants. The time for transplanting is when the ground is what we call "dry." The mode of planting is to make a hole with the hand, or otherwise, of the proper depth to receive the young plant; and when it is placed in the hole, I pour in half a gill of water, so that the earth may settle around the fibrous roots; then, I draw the dry earth around the plant and compress it a little with the hoe. In less than twenty-four hours, the plant will be as vigorous as though it had never been removed. On good land, the distance of the plants apart should be from eighteen to twenty inches, for thin land fifteen inches will be sufficient. The yield in this section, is from one hundred to one hundred and fifty bushels to the acre. I should state that the plants required to be hoed about as much as corn. The vines should be thrown on the ridges, out of the way, while dressing. In digging, I use a large, long, flat, three-tined dung fork, to throw the tubers out of the ground. When dug, I spread them to dry and wilt somewhat, preparatory to putting them up for winter, which requires much care. My place of keeping is a cellar-kitchen. I pack them in boxes of dry sand, placing a scantling upon the floor for the boxes to rest upon. I keep the sand from year to year, and sometimes have it kilned.

The price of sweet potatoes here is from 62½ to 75 cents per bushel.—Henry J. Deaver, of Morgan Co., Ohio, in *Virginia Farmer Journal*.

Advice to Purchasers of Horses.

BY ROBERT LAIDLAW, VETERINARY SURGEON, CINCINNATI.

To become a judge of the horse's conformation, the uninitiated should, in the first place, learn the names by which horsemen indicate the different parts; next he should know to what variations these parts are liable, in form, position and development; and, to apply this to a useful purpose, he must know what are the consequences of these variations; or, in other words, what influence they have upon the horse's capacities. Written or oral instructions will afford him great assistance, but he must not expect them to make him a competent judge. He must have recourse to the horse for which they cannot be written. After obtaining what may be called the theory, he must obtain the practice, by observation; after learning what he is to look for, he must teach his eye to perceive the peculiarities of conformation when they are before him. This is easily managed by attentively, and in a systematic manner, examining many horses, and comparing them with each other. It requires many words and some time to describe the shapes of the horse; but an experienced eye detects beauties and perfections in the glance of a moment. A professed dealer will single out a horse for his purpose almost the moment he sees him. I mean in regard to shape and not soundness. But he has served a long ap-

prenticeship before he acquired this facility, and it has been the longer that he has had few or no rules to guide him. From occasional remarks of more experienced hands, and from insensibly noting striking peculiarities, and afterwards learning how these animals turned out, whether well or ill, he cannot but consider the properties as the consequence of the peculiarities of conformation. Many observations of this kind at length teach him what to expect from horses possessed of a certain form. It is obvious, however, that information obtained in this manner must be obtained very slowly. If there were no other method, the private purchaser would never be so well qualified to judge, for his opportunities are very limited when compared with those of the dealer. Yet, by adopting the mode mentioned, he may acquire the same degree of tact in a much shorter period.

The head varies considerably in size, form and expression. In the saddle-horse, it can not be too small; the ears should be small, pointed, placed wide apart, yet not hanging downwards and outwards, the space between the eyes should be flat and broad; the eye large, protuberant, expressive of vigor; the face flat, or nearly so; the muzzle thin, tapering to the lips, free from fleshiness; the nostrils thin, their entrance large and open; the space between the branches of the lower jaw, called the channel, should be wide. The head should be so placed on the neck, that their junction may form an angle neither very acute nor very obtuse.

A large head is generally unhandsome; it is common to draught horses. The countenance often exhibits a total want of animation; the eyes are small, sunk in their sockets; and the lids are thick, clumsy. They are termed pig or crow eyes. The forehead is narrow, indicating a small brain, and its usual though not invariable accompaniment, a want of energy. The nose is often arched, and such horses are called Roman-nosed; the entrance to the nostrils is small, and the borders thick, fleshy and collapsed; the ears are large and hang downwards, as if too weighty to be supported; as the horse moves his head, the ears wave from side to side as if uncontrolled. Such horses are termed lob or lop-eared. It has been said, but without much truth, that they are often good goers; the ears will not make them good or bad, but the lop-eared are generally sluggish. The channel is narrow, and, in consequence, the head appears to be awkwardly placed upon the neck; the throat is thick; the motion of the head appears restrained, and the horse cannot suffer tight reigning-up; there is not sufficient space between the jaws to receive the head of the windpipe without compression. These horses never carry their heads gracefully, and they are, more than others, subject to rearing. In the saddle-horse, a heavy, ill-set-on head makes him bear heavily on the hand of the rider; makes him liable to stumble; and a head of this kind is often combined with other defects in form. The head of the draught-horse, however, need not be too strictly criticised; the harness hides its unseemly shape, and the support which the collar affords, counteracts the horse's tendency to fall on his knees.

The neck of the saddle horse should be long, thin, not too much arched, yet describing a curve from the withers to the fore-top. It may be too thick and heavy in the saddle horse, but can hardly be too long. An eminent authority, however, contends, that it can never be too short, and that a long neck, by adding to the weight, burdens, and wears out the legs and feet, besides making the horse liable to stumble. "Give me a horse," said Professor Coleman, "that will starve at grass—that is one with a short neck." But this is not the wish of a good horseman. The length of the neck always bears a certain proportion to the height of the withers; if the neck be short, either the head must be long, or the withers must be low; and a practiced rider knows which of these evils he would most avoid. He that has ridden a short-necked horse, has occupied an uncomfortable seat; he has felt as if the horse was all behind him, or constantly going down hill. Moreover, length of the neck gives the rider more power over the horse's mouth. There is an important muscle, too, of great use in bringing the legs forward, and preventing stumbling, whose length and power, in a great measure, depends upon the length of the neck.

The junction of the neck with the shoulder is very different in different horses. In all those intended solely for the saddle, it is important that the neck stand high on the shoulder, rising upwards and forwards; it gives the horse a lofty, commanding carriage, and insures safety on the road. When the neck is placed lower on the shoulders, it runs almost directly forward, as in the ox, describing a line nearly straight with the neck; the horse has a mean appearance, is usually slow, and bears constantly and heavily upon the bridle; in such cases, the neck itself is always short. When the neck is arched downwards, the horse is said to be *crest-fallen* or

bow-necked; they are apt to project the muzzle, and carry the head so that they can hardly see before them. These are also termed *star-gazers*. For the draught-horse, a long and thin neck is less essential than for a roadster; yet it is probable he has more power, and he certainly looks better when the head projects considerably from the collar. It should not, however, as in the saddle-horse be thin; when it wants substance, the collar must be small, and there is then some difficulty in getting the head through it; and the additional weight which a thick neck confers, is no disadvantage to the draught-horse, for much of his power depends upon the weight he can throw into the collar.

The withers—that is, the ridge between the pommel of the saddle and the termination of the mane—should be elevated, spare, easily embraced with the hand. When the withers are high, the horse is said to *stand well up before*; and dealers usually attempt to exaggerate the height, by making the horse stand with his head up-hill, when shown to an intended purchaser. When the withers are low, the shoulder appears thick, overloaded with flesh. Such horses are unpleasant and unsafe to ride; the weight is thrown too much forward, and they are apt to stumble. The saddle shifts forward, the rider feels as if the horse was always going down hill. In the ass and mule, the withers are usually very low; and this is one reason why they are so unpleasant to ride, and why it is so difficult to keep the saddle in its proper place without the aid of a crupper. High withers, however necessary for safety and ease, are not essential to the racer or collar-horse. Very few draught horses are high before; and "Eclipse," so celebrated for his speed, had low withers, as, indeed, had the most, or a great many, of racing notoriety. In other words, low withers, a thick shoulder, a short and ill-set-on neck, often go all together. Mares are generally lower before than behind.

The shoulders should be deep, extensive, slanting from the withers downwards, and forwards, and seeming to be confounded with, or running into the neck. In the heavy draught-horse, the space between the withers and the elbow joint—that is, the depth of the shoulder—is comparatively inconsiderable: the neck terminates abruptly, and is quite distinct from the shoulder, which swells outwards all at once. The difference may be ascertained in the dark, by mere passing the hand down the neck and over the shoulder; in the one case it passes insensibly on to the shoulder, and in the other it is suddenly arrested at the seat of the collar. The difference chiefly arises from the length and position of the shoulder blade. In the draught-horse, this bone is shorter, and stands more uprightly; the muscles have less room; they are clustered together; some of them are shorter, and the motion of the whole shoulder and limb is much less extensive than is requisite for good action and safety in the road-horse. This kind of shoulder, so common in heavy horses, is far from being disadvantageous for those that are altogether confined to draught-work. While it allows them all the action and all the safety their work requires, it affords a convenient bed for the collar, which is not disturbed as in those that have more motion in the shoulder. But the same kind of shoulder renders the saddle-horse liable to stumble, and is usually slow, confined in his action, especially in the trot. It is often combined with low withers, a short and ill-set-on neck, a wide chest, and an unsafe inclination of the body over the fore-legs. It is never seen along with a deep chest.

Sheep Husbandry.

The season for out-door work being about over, and the time here at which farmers are making their arrangements for the winter management of their stock, etc., and having some little leisure, I will commence redeeming the pledge I made you at our county fair, by writing for your paper occasionally an article on the subject of sheep. What I say will be mainly my own experience, having paid considerable attention to the management of sheep for the ten years last past. My flock has averaged about seven hundred, sometimes having more, sometimes not so many; always making it an object to keep the flock, in numbers, proportionate to the feed on the farm. Have now about six hundred and fifty, recently sold having about what was equal to the last year's increase, say one hundred and seventy. Raise annually from one hundred and fifty to two hundred lambs, and dispose of about a corresponding number of sheep during the year.

I think the character of a flock depends very much on the practice of the owner in making sales. Care in breeding is of course of the very first importance, but this, without proper management in the sale of a surplus stock, very often leaves the owner with a flock, that is not as in all respects it should be. My rule is, never to suffer a purchaser to pick my flock, always doing the picking myself

Want to pick when I buy—will pick when I sell. Ewes we always sell in the fall—selecting for that purpose first such as are getting a little old, next such as are in any particular defective. By this means our flock of ewes is always right, and looking right. Never suffer a sheep to get old on the farm, unless perhaps a very choice buck or breeding ewe. Never suffer a ewe to have a lamb until she is at least three years old. This for two reasons—first, it injures the sheep; next, generally young ewes are poor nurses, and cause a great deal of trouble to the shepherd. This is especially the case with fine sheep. In the sale of wethers, we are governed by circumstances. Pasture scarce, we sell in the fall. Pasture and feed abundant, and we fatten for the drovers or butchers in March or April, never permitting wethers to get over five years old before selling them. By these means, the flock is made always to consist of young, healthy and thrifty sheep. Better that old sheep should be sold at half their value, than good young thrifty ones at a fair price. Feed for this winter being a little scarce, we have sold all our wethers over three years old, and now the number of our sheep being proportionate to the feed on hand, we are preparing the flock for winter quarters. Our breeding ewes are selected and in a flock by themselves. This week they will be subdivided into flocks of not over fifty, and with each flock will be put a buck—selecting of course the best bucks, and the ewes with reference to the buck. This brings the lambs the latter part of April and first of May—which for many reasons I consider the best time.

Next are our last spring lambs divided into flocks with reference to age, sex and condition—never over one hundred together, usually about eighty. Next is what we call our stock sheep, consisting of ewes and wethers not under one and not over three years old. This flock now consists of over two hundred, but so soon as we commence to feed, will be also subdivided according to size and condition—bucks of course in a flock by themselves. The sheep are now in their respective stables at night, and will also begin to feed in a few days. One of the most important items in the management of sheep, is to have them go into winter quarters in good and healthy condition. By paying strict attention to this, we have not of late years lost over one or two per cent. during the year.

Stark county has reason to be proud of the numerous flocks of fine sheep within her limits. Our wool growers are among the oldest and most successful in the State, all anxious to excel in the character of their flocks.—Prominent among them are Messrs. Hildenbrand, McDowell, Everhard, Ruthrauff and others. Our flocks consist mainly of the old Dickinson Merinos. Recently quite a number of French pure, the Spanish pure, and the old Merinos pure, and also crossing each class with every other, all the time having an eye to that which will bring the most in dollars and cents: profit in this, as in every other business, being the principal object.

I will write you again soon, giving a description of my sheep barn, and our method of feeding.—S. LAHM.—*Ohio Cultivator*.

Atmospheric Air is one of the best Non-Conductors of Heat.

Philosophers have proved, by innumerable experiments, that Atmospheric Air is the best cheap non-conductor of heat. In fact, when rendered perfectly stagnant by confinement between other slow conductors, it scarcely conducts at all, though heat expands it, and consequently increases the volume while it diminishes the weight of a given measure.—Hence heated air rises while the colder surrounding air rushes towards the heated place to restore the balance and maintain the equilibrium. On a knowledge of these facts and their artistic application, depend many of the comforts of life, and the successful avoidance of loss by fire to which the careless often subject themselves, as a few instances will illustrate.

1. Fur keeps our bodies warmer than woolen clothing, woolen warmer than cotton, and cotton warmer than linen, principally because the former contain more stagnant air than the latter, and partly because they are worse conductors of heat. Hence, also, cloths made of loosely twisted thread are warmer than hard twisted.

2. Brick or stone buildings, plastered against the bare walls, are the coldest in winter and the warmest, that can be built, because brick or stone and mortar are good

conductors of heat, and consequently conduct heat out in winter and in in summer. But if the walls be studded even with inch studs, lathed and then plastered, the buildings are the most comfortable, simply because the stagnant air between the walls and the plastering does not conduct heat.

3. The same reasoning applies to any loose substances that contains stagnant air in its interstices. Hence, by burying himself in a heap of unpacked snow, a person may preserve his life in cold weather, while those in the open air would perish.

4. Ice may be preserved in summer, on the surface as well as under ground, by making the walls, floor and roof of the ice-house double, and filling the vacant space with sawdust, or with the refuse ground bark from a tan-yard, which is better because it does not rot so soon. In this case the preservation of ice is owing solely to the stagnant air contained in these substances; and, if the walls and roof could be made air tight, no sawdust or tan-bark would be needed between them.

5. Loose ashes is another substance that contains a large quantity of stagnant air: and many buildings are annually consumed by fire preserved in ashes set aside in iron or wooden vessels to cool near combustible matter. I have known a floor scorched under an iron kettle into which ashes (apparently containing no live coals) had been emptied every morning from day to day. No fire appeared on the surface of the ashes; but when stirred up they were a red hot mass throughout. In these instances even an imperceptible spark will kindle adjacent cinders, while the stagnant air confines all the heat generated till every cinder is consumed and the whole heap red hot, except a thin layer on the surface. I have also seen the boards of a box reduced to the thickness of paste-board, without exciting suspicion.

H. R. SCHETTERLY.

Draining Economy.

Are there any of your readers who have compared the actual cost of making and laying down drains of tile and drains of cobble stone? If there are, I should like to hear from them. I have got any quantity of cobble stone on my farm, but I can also procure all the tile I need by drawing them a distance of eight or ten miles. With me it is doubtful which would make the best drain, which would cost the least to make, but it seems that the fact of having the stones on hand, for the mere picking up, as they have to be taken care of at any rate, and if removed from the surface, would have to be left in piles, or used in fences, would suggest them as the cheapest improvement. But still it is questionable if a stone drain would answer the purpose of getting rid of the water as well as tile. H. G.

MICHIGAN STOCK REGISTER.
SHORTHORNS.

Numbers with an "e" following them refer to the English Herdbook—all others refer to the American Herdbook, unless otherwise noted.

No. 91.—JOHN OGGAUNT. Bull, white. Calved, Jan. 5, 1858. Bred by John S. Tanqueray, Brent Lodge, England. Imported by L. G. Morris, N. Y.

1. dam, Romelia, by Flageolet, 913e. Romelia was imported by L. G. Morris in 1852, and was in calf with John O'Gaunt, at the time of her importation.

2. dam, Romelia 2d, by Doncaster, a son of St. Leger 505e.

3. dam, Romelia, by St. Leger, 505e.

4. dam, Romelia, by Eclipse 1949e.

5. Sylvester, by Commodore 2976e.

6. dam, — by Darius 954e.

7. dam, — by McGregor 2235e.

8. dam, Lily by Albany, 18e.

9. dam, Barton, by Midas 495e.

10. dam, Beauty, by Brighton 90e.

11. dam, Cowslip, by Son of Windsor, 698e.

Sire, John O'Gaunt, 11621e, by Horatio 10590e; by Hamlet, 8126e, by Leonard, 4210e, *dam*, Lancashire Witch by 2d Duke of Lancaster 595e; *dam*, Amalthea by Bellerophon 3219e; — Duches by Duke of Cleveland 3640e; — Princess by Alderman 2976e.

At two years old John O'Gaunt, the sire of Mr. Brooks' bull, had his portrait taken for the English Herdbook, and it presents a roan bull remarkable for fine form, and quality, lightness of head and neck and length of body.

No. 92.—COMET. Bull, white. Bred and owned by D. M. Fox, of Lyons, Eich. Calved July 11, 1858.

1. *Dam*, Minnchaha, by Haymaker 1845, a bull bred by the Shakers, and brought into this State by J. B. Crippen.

2. *Dam*, Sarah Chambers, by Rhoderick, 982, a bull out of imported Ann Rusk, and by Otley, 4632 of the English Herdbook.

3. *Dam*, Cynthia by Olympus 771, a Kentucky bull sired by imported Comet 836, out of Mary Tilford, by imported Symmetry; she out of imported White Rose.

4. *Dam*, Ann Warfield, by imported Goldfiner 2066e.

5. *Dam*, Red Rose, imported, by Ernesty.

6. *Dam*, Rosney by Eryholme, 1018e.

Sire, Orpheus 1971, by imported Duke of Gloster out of Songstress, imported.

No. 93.—LILY J. DALE. Red and white heifer. Calved July 16, 1858. Bred by J. B. Crippen, Coldwater. Owned by D. M. Fox, Lyons, Mich.

The Garden & Orchard.

The Dwarf Pear Question.

Perhaps no single subject has, for the last few years, attracted so great a degree of attention in the horticultural world, as that of growing the pear upon quince stocks.

The fact that, upon this stock, its natural tardiness could be overcome, and its luscious fruits obtained the first or second year after planting, was too tempting an inducement for people so proverbially impatient of delay as we are to forego; and, accordingly an extensive demand at once sprung up for dwarfs.

With a demand so suddenly created, and supplied, as it was for the most part, by men of no previous experience or information on this subject, it is not surprising that many of our first apprehensions should fail of realization, when brought to the test of experience.

Mr. Thos. W. Field, the present Secretary of the American Pomological Society, in his treatise on Pear Culture, recently published, remarks as follows upon this subject: "In the first glow of satisfaction with which pomologists received the announcement that the much coveted pear, which demanded the care of two generations to witness fruiting, could be grown successfully upon the quince, every variety of pear was grown on every variety of quince, and the consequence was, a disappointment, whose reflux, for a few years, seemed to threaten the very existence of quince-rooted pear trees, and cause their extermination.

"It has now become fairly settled, that while all varieties of pear will exist upon the quince root, but few will bear the test of the following rules, for growing the pear upon that stock:

1. The variety must have such affinity for the quince, as to grow equally well upon it and the pear root—which can only be known by extensive experiments, by persons in different localities.

2. The sort of pear tree must be very considerably earlier in coming into bearing than upon its own roots. In the case of the Bartlett, but little would be gained by its possessing an affinity for the quince, as it is sufficiently precocious in its fruiting, to dwarf the tree on its own stock.

3. The pear should be somewhat improved in size, flavor, and perhaps, in some varieties, in productiveness.

"When all these conditions are fulfilled, it will be found that comparatively few varieties imperatively demand the quince stock for their perfection. At the same time, almost all can be grown upon it, by complying with the following conditions for their treatments, in planting, cultivation, and fruiting, viz.:

To bury the quince some inches below the surface.

To cultivate the ground thoroughly, and supply sufficient nourishment.

To carefully prevent overbearing when young."

When the furore for dwarfs first arose, planters were told that the dissimilarity of stocks was the cause of the earliness of fructification, and, therefore, they must be careful to plant so shallow as not to induce the production of roots from the pear; as, in that case, their plants would assume the character and tardiness of standards. The great mass of planters seem to have acted upon this mistaken idea, and in many cases even among intelligent cultivators the practice has been, to set them as they stood in the nursery, with the point of union entirely above the ground.

Under such circumstances, and, with perhaps nineteen twentieths of our trees, of varieties unsuited to the quince, it is not surprising that failure should be the rule, and success the exception; especially, when we recollect the decimating effects of the severe winters which occurred during the partial continuance of this state of things, and, which, doubtless, contributed much to aggravate this state of feeling.

It was, apparently, under the influence of feelings arising out of this state of things, that an article was written by Mr. Stoms, of Cincinnati, and read before the Horticultural Society of that city, sometime during the year 1857, in which dwarfs were condemned without stint, and, in which the writer, also, took occasion to review the position of Hon. Marshall P. Wilder, on this subject, applying to him some harsh epithets, and challenging a vindication of his position in the matter.

This, of course, drew out a reply on behalf of himself, and, also, of Boston cultivators generally, which, while it was a triumphant vindication of the success and profitability of dwarfs, under the culture indicated, is understood by the writer, to be an acknowledgement

ment that, as a rule, the longevity of quince grafted pear trees can only be insured by planting them deep enough to enable them to root from the pear. This, of course, is really a giving up of the *dwarf theory*, as formerly taught, and instituting in its place a sort of hybrid, or cross between the two.

This dwarf-standard theory, (if I may so call it) seems to have been eminently successful, where it has been practiced under proper circumstances, and has at once been taken into favor by growers generally, promising, as it does, to secure the early fruitfulness so anxiously desired, and, at the same time, insuring that longevity, the lack of which would rob the system of half its attractiveness.

While this idea has been taking hold of the horticultural mind of the country, the fact alluded to in the foregoing extract, that but few varieties are permanently successful upon the quince, has also become established, and generally understood among growers. Following the foregoing extract, Mr. Field, who seems to feel the necessity of caution, and experience in this matter, gives outlines, and descriptions of ten varieties of this fruit, which are all that his knowledge and experience enable him to recommend, to be grown on this stock, viz: Beurre d'Anjou, Beurre Superfine, Beurre Diel, Duchesse d'Angouleme, Easter Beurre, Glout Morceau, Louise Bonne de Jersey, Vicar of Winkfield, Urbaniste, and White Doyenne.

The list recommended for this purpose, by the American Pomological Society, embraces about twenty, or twenty-five varieties, but a list of them must be deferred till the publication of the Society's transactions.

In the extract given from Mr. Field, he says, that nearly all varieties may be grown upon the quince stock, if certain specified conditions be complied with. The complying with these conditions, however, as may be fairly inferred from the language used, by no means insures profitable results, in these cases, or even successful results in any sense; but, merely the possibility, or, at best, the probability of success. Indeed, the conditions specified really require that the tree be so planted as to enable the pear to emit roots, and, that it may be so manured, cultivated, pruned, &c., &c., as to induce such rooting from the pear, and to guard against allowing any check upon its vigor, until it has time to become established as a standard.

That the reader may fully appreciate the force of the above remarks, it should be here stated, that as the real cause of the early fruitfulness of quince-grafted trees lies in the dissimilarity of the stocks, the greater that dissimilarity the greater the tendency to an early, and undue production of fruit, and, also, to the production of roots above the point of union; and, as some degree of vigor is necessary to the production of roots, the vigor expended in the production of a crop of fruit, is, so much, in derogation of the ability of the plant to establish itself upon its own bottom.

The principles then, upon which the cultivators of dwarfs rely, are these: the employment of the quince as an incidental, or temporary means of support, and the calling into use the native vigor of the pear, whenever that stock fails fully to meet the demands of the plant.

In a subsequent article, the writer will consider some of the more common causes of failure in the cultivation of dwarfs, together with some of the more essential conditions of success.

T. T. LYON.

Plymouth, Feb. 7th, 1859.

THE PEAR.

BY PROF. J. C. HOLMES, LANSING.

(Continued from page 51.)

If the clay soil of Detroit is peculiarly adapted to the successful growing of the pear tree, perhaps it would be well to know something of its composition and its extent.

For the benefit of those who are not already informed, I will state that several years ago there was a practical geological survey of the State. It was conducted by the late Dr. Douglass Houghton. Upon looking over the reports of Dr. Houghton, I find a report of Bela Hubbard, Esq., of Detroit, assistant geologist, upon the *Topographical Features*—soil, and agricultural character, &c., of Wayne county. This report was made January 26th, 1839.

In speaking of the soil of Wayne county, Mr. Hubbard says: "Clay and sand loams constitute the soils of the timbered lands.—These occupy nearly equal proportions of surface and often alternate within short distances. The former derives its character from a bed of yellow or brown pliable clay, which repose upon the extensive blue clay deposit immediately overlaying the lime-rock. Clay is reached throughout the portions char-

acterized by sandy soil at a depth of from five to twelve feet.

"The upper clay has an average thickness of five feet. The lower clay is of a variegated blue color, gravelly, and intersected by layers or strata of quicksand and gravel. This clay sometimes approaches the surface, as in the vicinity of Detroit. Its average thickness must exceed one hundred feet.

"These soils are excellently adapted to agriculture. Silex enters largely into their composition. Both clays generally contain a large portion of lime."

I do not know that a careful analysis of these clays has ever been made. The only one that I can find was reported by Mr. Hubbard, as an approximate, not a full analysis.

He says: An analysis of 100 grains of the clays, taken at random, shewed—

	Upper Brown Clay.	Lower Blue Clay.
Sand and Siliceous matter.....	51.50	27.50
Alumine.....	29.05	52.50
Carb. Lime.....	18.55	18.08
Oxide of Iron.....	60	1.22

In a communication to the "Western Farmer" (now MICHIGAN FARMER), in May, 1841, Mr. Hubbard observes: "These clays are found to underlie all the counties along the border, or east and west slopes of the peninsula, together with parts of the counties adjoining, and a large portion of the counties of Ingham, Eaton, Ionia, Clinton, Shiawasse, and Genesee. Throughout this portion of our territory these clays sometimes come to the surface, and are bare of the covering of sands and gravels, as is the case at Detroit.—The yellow or brown colored clay in the uppermost, and has on average thickness of about five feet. The lower, blue clay, exceeds in thickness at Detroit 100 feet. The remainder of the State, south of Grand and Saginaw rivers, is destitute of this sub-clay formation, and its diluviums of loose materials rest immediately upon the rocks."

I would like to show by chemical analysis of the above mentioned clays, that they contain, in abundance, the inorganic substances requisite for the healthy growth of the pear tree. Perhaps at some future time I may be able to do this, but for the present I must be content with giving the approximate analysis of the soil, as above quoted, and here introduce an analysis of the sap-wood and bark of the pear tree as made a few years since, by Dr. Emmons, of Albany, N. Y.:

ASH OF THE PEAR.	Sap-wood.	Bark.
Potash.....	22.25	6.20
Soda.....	1.84	
Chlorine.....	.31	1.70
Sulphuric acid.....	.50	1.80
Phosphate of Lime.....	27.22	6.50
Phosphate of Peroxide of Iron.....	.31	
Carbonic acid.....	27.69	37.29
Lime.....	12.64	30.36
Magnesia.....	3.00	9.40
Silex.....	.30	.40
Coal.....	.17	.65
Organic matter.....	4.02	4.20
	100.35	98.80

Upon looking over this analysis, it will be seen that lime enters largely into the composition of the sap-wood and bark of the pear tree; this tells us that if a soil is deficient in lime, or if it contain an abundance of it, but not available, then we must plant our pear trees in other soil, or supply the deficiency, ere we can realize a good return for our expense and labor. The clays of Michigan abound in lime, but the sandy soils are not so well supplied with this substance, therefore the pear tree flourishes better upon our clay than upon our sandy soils. Some pear trees flourish better on a light soil than a heavy one, yet, the light soil must be a calcareous one, or the tree will become diseased, drop its leaves early in the season and refuse to grow.

Dr. Kirtland remarks, that "The deficiencies which occur in most soils may be, to some extent, artificially supplied. Animal bones, urine, the sweepings of the poultry-house and yard, and guano, are the principal sources from whence the supplies must be furnished.

"My own trees have been greatly improved both in their vigor and productiveness, by burying about their roots large quantities of unground bones; time and weather break them down as rapidly as the trees call for supplies. The surface of the ground has been dressed with ashes and refuse lime. Under this course of treatment I never had a pear tree attacked with any species of blight.—This may have been accidental."

I have grown a great many pear trees upon the clay soil of Detroit, and fruited over one hundred varieties. In my grounds at Detroit I had a variety of soils, whereby I was enabled to try a great many experiments in fruit culture. The principal soil was brown clay, alternating with sand and gravel. When I first took hold of it, it was an unpromising looking piece of land, but I underdrained it thoroughly, manured it well, plowed it deep, and stirred the subsoil with, not a double, but a subsoil plow.

Here was a soil that had been under cultivation for nearly a century, wet and cold, never before underdrained, and but slightly

surface drained, and probably never plowed more than three or four inches deep. In this condition it was said to be "worn out," but I plowed deep and found stored away there all the inorganic elements necessary for the production of choice specimens of horticultural products, flowers, vegetables and fruits.

The Lawton Blackberry.

That the Lawton, or New Rochelle blackberry is gaining favor more and more every year, and becoming more extended and disseminated throughout the country, having proved itself a superior and valuable fruit, there can be no doubt.

Its superior excellence has been publicly proclaimed over and over again by most of the leading Pomo'ologists and fruit growers throughout the country, leaving no room to doubt its genuine claims to merit.

Its origin, history, &c., must be so well known to all of our readers, that it would be superfluous in us to say any thing on that head. We shall therefore proceed to give a few brief directions for its culture and management.

For garden culture, where a couple of dozen plants would be sufficient to supply the wants of a large family, a strip of ground four feet wide, may be spaded up deeply, the length you require. This is for one row. It would be a good plan to have a trellis to tie the canes to, when grown in a small way like this.

Posts may be set in the ground six feet high and ten or twelve feet apart and narrow strips nailed on at two and four feet from the bottom.

When the plants are received, if your ground is not ready, unpack and bury the roots in fresh earth till all is ready for planting. Set the plants about four feet apart and three inches deep; cut down the canes to within a few inches of the ground, and if planted in the fall, mulch them well with straw and other litter.

They will throw up one, perhaps two, strong shoots from the roots the first year. If more than two should appear, they should be pulled off, as the plant, till it gets well established, will only throw up weak shoots if too many are left. Be careful not to break off the young shoots by hoeing or otherwise, before they make their appearance above ground. All the cultivation they will require the first year, is to keep down weeds and work the ground well with hoe or fork.

The shoots of last year should be shortened one third of their length, if they have any laterals, they may be shortened in the same proportion. This should be done in the spring, and the canes may then be tied to the trellis, to bear fruit which they will do this year.

At the same time other shoots will make their appearance, stronger and more numerous than those of last year. Not more than three or four at the most, should be left, at any time. These can be spread out on the trellis and tied each year and all other shoots that start may be pulled off leaving only three or four of the strongest.

Like the raspberry, the canes which have fruited this year die, and must be removed in the fall leaving only the young canes which are to bear the next year's crop.

Keep the ground well cultivated, and clear of weeds during the early part of the season, at the same time cut up all young plants that come up, out of the row, and indeed all but the three or four left around the old stool. Later in the season, and before the fruit begins to ripen, the ground along the rows, a couple feet in width, may be mulched with old hay, straw, or almost any litter, that can be got hold of. This will be found of especial value, keeping the ground moist and friable, and the fruit clean.—Carew Sanders, in *Valley Farmer*.

HORTICULTURAL NOTES.

A most useful Implement for the Garden.

The cut represents as well as it can, a neat little hand cultivator for the garden, the utility and economy of which very few will be able to fully appreciate until they have tried it or seen it at work. Last summer we saw one of these implements tried in the garden of E. Brush, Esq., of

and to prevent the weeds and grass from getting the start of the plants. Where the beds are large, it is not always that time can be given to pass over the rows with the hand hoe as often as the rapid growth of the weeds require. The soil itself also, crusts over with each shower of rain, and where the soil has a clayey nature, this crust is difficult to break up when allowed to remain untouched. The little cultivator hoe enables the gardener to pass through the rows three or four times, where he could not go over the ground once with the hand hoe; hence one of the peculiar benefits of this invention. C. Bliss of the seed store in this city has these implements for sale, and will be found ready to send them to any who may desire to give them trial.

The Plum and the Currulio.

Mr. H. F. Baker informed us, whilst visiting him at Lyons last week, that he had found little difficulty in raising full crops of plums, when he gave his trees the right kind of treatment. His practice was to turn over the earth with the spade at an early season of each year, that was immediately around each plum tree, and as far out as the branches extended. He then spread under each tree on the dug soil, a coat of ashes, leached or unleached, just as he happened to have them; and on this he sprinkled at the rate of two or three quarts of salt to each tree. Soon after the trees come in flower, he procured the flowers of sulphur, and when there were slight showers of rain, or heavy dews, he dusted once in ten days, during the currulio season, the trees with the sulphur, throwing it upwards among the branches. When this treatment was pursued, he never failed in having heavy crops of very choice, large fruit, and the trees were entirely free from gum and black knots. The bark was bright and clean.—One season a tree was left among the others, not thus treated by way of experiment, and the insect was found to completely destroy the fruit and not to leave a single specimen on the tree, whilst the others in its immediate proximity bore good crops.

The Cherry Currant and its Treatment.

We extract from a circular sent us by Charles F. Erhard, of Ravenswood, Long Island, a description of the *Cherry Currant* and his treatment of it:—

Description.—It is not a distinct species of the genus *Ribes*—only a new variety of *Ribes Rubrum*, of which the red and white Dutch and many others are also varieties. It is, therefore, just as hardy as the common currant. The distinguishing properties of the *Cherry-Currant* are: strong, robust growth of the bush; the shoots being stout, the leaves larger, and of a darker green than the common sort. The blossom of the *Cherry-Currant* is easily distinguished

FOREIGN AGRICULTURE.

Fruit Bud Grafting.

The following is from the London *Gardener's Chronicle*, and describes mode of growing choice fruit on old trees, immediately, which some of our amateurs may find time to try in our climate. The system may be carried out this season, by using fruit buds, which might be taken from trees that gave promise of having more than their share:

"The great interest excited by the method of immediately rendering fruit trees fertile by using fruit spurs or buds as scions is so great that we lose no time in returning to the subject. In another column will be found a translation of a good practical paper by Mons. Baltet, a French nurseryman, in which he fully describes his mode of operating. The following memorandum from the valuable correspondent who first drew attention to the practice, also throws further light upon the question:-

"The notice, in a late Number, of a sentence contained in the brief report sent to you of the Exhibition of flowers, fruits, &c., held by the Horticultural Society of Paris last September, viz., 'that the finest Pears exhibited were produced from flower-buds which had been inserted on barren spurs of other trees during the previous autumn,' leads me to offer some additional information on the matter. You state you are not surprised at the inquiry made about this novel operation, and farther, that no success has attended your examination of French works on gardening relative to it, consequently you are driven to the conclusion 'that reporter was misinformed, or else the method of grafting (budding I would rather call it) is undescribed.' In reference to the foregoing, I would beg to state in the first place, that my opinion on the superiority of the fruit appears to have coincided with that of the judges, who awarded a first-class prize to the group; and in the second, it was under the supposition that the latter of your conclusions is correct, at least in so far as English practice and works on horticulture are concerned, that I considered the subject worthy of being recorded. My imperfect knowledge of the French language might make me doubt whether I understood exactly the information given to me by the gentleman who exhibited the fruit in question, but it was fully borne out by what I saw. The spurs on the parent tree on which the fruit buds were inserted were cut off together with the latter growing on them, and the fruit still attached, of which I made the accompanying rough sketch. Judging from the extracts you give of M. Pepin's report and M. Bourgeois' garden, I consider the budding with fruit buds to be similar both in practice and effect to that in question. I may also refer to another French work where this method of budding fruit buds is very pointedly alluded to, viz.: 'Méthode élémentaire pour tailler et conduire soi-même les Poiriers, Pommiers, et autres Arbres Fruitières,' &c., par Jean Lachaud. Paris, Bouchard-Hazard, Rue de l'Éperon, No. 5. At page 49 of that work, under the head 'Greffé de boutons à fruits,' the author states: 'This mode of working is employed at the beginning of August for Apples, and at the end of the month for Pears; and after giving directions for the performance of the operation, he further states: 'This method is employed successfully on trees which are obstinately barren; it ensures a crop the following year; and when once the fruit spurs are fixed on such trees, the crop they bear will completely overcome the excessive vigor of the stock, and hasten the time of ripening.' The foregoing may assist inquirers on this interesting subject, which I have no doubt can be fully explained and detailed on by M. Louis Bernier, au château de Boulayes, près Tournan (Seine-et-Marne), or his gardener, M. Mayre, who according to my notes are the parties who exhibited the Pears."

In further illustration of the effect of spur grafting we have before us two branches of the Easter Beurre thus treated at Trentham, where the method has for some time been employed under the intelligent management of Mr. Fleming. One of these specimens had been a scion 5 inches long with a single spur on the side. In the first season it made 3 inches further growth, and has now seven magnificent pears on 8 inches of wood. The other specimen had been a scion nearly 4 inches long, with a spur near its base. The first year it made rather more than 3 inches of wood with two spurs. The second year it extended 10 inches forming four spurs; and this year it carried nine capital fruit on about 17 inches of bearing wood.

In one important respect Mr. Fleming's method differs from the French. They graft in August only, he grafts both in spring and autumn. The French seem to have taken August in order to avoid with certainty the chance of the fruit spurs breaking into wood and forming branches, as we should have feared they would do. No such bad consequence appears however to have been experienced at Trentham. The method of working ther-

adopted is the common English side grafting, the only kind that can be conveniently followed.

That this process will come largely into use can hardly be doubted, for it enables the gardener immediately to cover the old naked branches of his wall pears with bearing wood, not only of the same variety, but of any other variety—an immense advantage—and it also invigorates old trees in a very remarkable manner by aid of the abundance of new healthy wood, which these stranger spurs immediately organize all over the old albuminum. For so complete is the junction between stock and scion in this spur-grafting that no force will separate the two after the first year.

The article by Monsieur Baltet on the above subject is taken from the Annals of the Horticultural Society of Ghent, and is as follows:

"For the last eight years we have practised grafting blossom buds in order to cause barren trees to bear fruit; and the results have always been satisfactory. In endeavoring to extend the practice, we cannot do better than give some explanation as to the mode of proceeding.

In the course of the month of August, cut off fruit spurs from trees where they are too numerous. Let them be shortened to lengths of from $\frac{1}{2}$ to $1\frac{1}{2}$ inch, and cut slanting as if for crown grafting; then make in the branch a T cut for the reception of the scion as if in budding. The graft should be tightly tied with matting or rushes; and as there is always a space at the upper part of the wound, surround it with grafting clay, pitch, or liquid mastic. In the following spring the fruit buds thus inserted will flower and fruit quite as well as if they had not been removed. Frequently, indeed, the fruit is much larger than that on the tree from which the grafts were taken. We should endeavor as much as possible to graft on a vigorous branch, and near its base; and even on the main stem very handsome fruits are in this way produced. These fruit spurs retain their bearing properties in succeeding years; and if an eye produce a wood shoot, it must be successively pinched back in the usual way.

It will be seen that by this system it is easy to utilize fruit buds which have been cut off in pruning, as well as those on trees which have to be transplanted, or on branches which are to be cut off, &c. Every eye should be turned to account; those fruit buds which have no spur may be raised up and worked like common buds; and spurs on which the fruit buds are crowded may be split longitudinally; in fact it is impossible to explain every mode of cutting the scion, for that must be left to the judgment of the operator.

The most suitable period for this operation is when the flow of sap is declining, for if performed too soon the fruit bud might become a wood bud; it is sufficient that the edges of the bark can be easily raised; and it is almost needless to add that the bud should have some albuminum attached to it, which must not be removed. We have made some experiments with this process, but the pear has always afforded the best results. We have one tree which bears, besides two varieties of pears, the White Beam and two sorts of Service, covered with fruit.

Pears, William's Bon Chretien, Colmar d'Arenberg, Duchesse d'Angouleme, Esperen, Beurre Clairgeau, Nouveau Poiteau, Alexandre Douillard, Spoelberg, and other very productive varieties, succeed perfectly well, and produce every year handsome and very good fruit. Experiments with large-fruited varieties worked with small ones, and melting kinds with those that are not so, have led to no conclusive results. Nevertheless several kinds of pears may be gathered from the same tree. The length to which the scion ought to be inserted is very variable; it should be in proportion to the length of the part not inserted, and a length of one centimetre, (four-tenths of an inch) has succeeded quite as well as one fifteen centimetres (nearly six inches).

We are of opinion that some kinds of ornamental shrubs may be treated in the same way.

M. Luizet, of Ecully (Rhône), was the first who called attention to this mode of grafting in 1849; after him a horticulturist at Rouen, and we were amongst the first who practised it in France. M. Luizet also increases the size of his pears by inarching an herbaceous or young growing shoot on their footstalks, and maintaining the fruit in a horizontal position. We have witnessed these facts and can vouch for the whole of them.

Dioscorea Batatas.

Hitherto we have only had the female plants, and as the plant is a dioecious one, no seed has been produced. The papers report that male plants have been received in France, and we may therefore confidently expect seedlings and new varieties, which may perhaps increase the value of the root.

We see several writers recommend poles for the vines to run on. Mr. Affleck, who gave us the specimens which we noticed a fortnight since, thinks that an acre of ground will yield, if well prepared, 1000 bushels, the roots remaining at least two years in the ground. It bears the winter perfectly, if somewhat advanced.—*The Homestead.*

Ionia County—Lyons—D. M. Fox's Improvements.

Last week we made a trip as far west as Lyons on the Detroit and Milwaukee Railway. The effect of the connections which this road has opened up to the people of the northern counties are as yet hardly understood, and but imperfectly realized by the farmers, but progress on every side is the order of the day, and it will be still more perceptible, when a season arrives that will give this part of Michigan a full crop. The light crop of the past year has prevailed no where more disastrously than in this part of the State. There is no grain to feed stock with, and though as a general rule, grass was good, the want of mill feed and the corn crop is felt severely.

The country around Lyons, and off towards Ionia, rises on both sides of the Grand river into rolling swells of land that in general are susceptible of cultivation to the summit. Over large portions of the county, these swells subside into prairies, which lie in long stretches of land, perfectly level, and composed of a light, rich friable soil, naturally dry, and of the utmost fertility, easily cultivated, and dotted with handsome houses and barns in every direction. Located on one of the largest of these plains, on the east side of the river, we found Mr. Olmstead a T cut for the reception of the scion as if in budding. The graft should be tightly tied with matting or rushes; and as there is always a space at the upper part of the wound, surround it with grafting clay, pitch, or liquid mastic. In the following spring the fruit buds thus inserted will flower and fruit quite as well as if they had not been removed. Frequently, indeed, the fruit is much larger than that on the tree from which the grafts were taken. We should endeavor as much as possible to graft on a vigorous branch, and near its base; and even on the main stem very handsome fruits are in this way produced. These fruit spurs retain their bearing properties in succeeding years; and if an eye produce a wood shoot, it must be successively pinched back in the usual way.

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At Mr. Hedden's farm we found a bull of the Byron stock, about seven-eights bred, which had proved very beneficial as a stock getter in the neighborhood, and was doing something towards grading up the native stock of the district.

We passed over the country between North

Plains and Ionia, in company with Mr. H. E. Degarmo, Esq., lately of Ypsilanti, who removed to Lyons about a year ago, and owns a small farm near Lyons, on the rich flats lying close to the Grand River. As the ground was covered with snow, we had but little opportunity to judge of the quality of the soil, but the growth of such timber as the hickory, the walnut, and the maple, and the prevalence of the hazel brush, indicate that it

was such as would rapidly repay the farmer for the enterprise that cleared and brought it into cultivation. Lands in the immediate vicinity of the railroad, however, are held at high rates, and in fact as much per acre is now asked, as they would be worth at the end of the next ten years.

Mr. D. M. Fox, Esq., has here a large farm, which he has been improving and stocking during the past year. He has erected a very handsome and convenient barn, with attachments for his cattle. This building is amply provided with a cellar underneath it, for the storage of roots, and the proprietor is now preparing to surround it with ranges of sheds. A fine, thrifty orchard of 400 apple trees has also been laid out.

Mr. Fox, in company with Mr. Degarmo, during the past autumn, brought up from the breeding herd of General J. S. Goe, of Brownsville, Pennsylvania, eighteen head of very choice thoroughbred, improved Shorthorns. We have already published the pedigrees of these cattle in the Stock Register, since the first of January, and an examination of them satisfied us that their introduction into this part of the State will prove beneficial. In addition to these, Mr. Fox has three head of the progeny of Orpheus, which are like all that bulls' stock, most promising in form, handling qualities, and general appearance.

It will be noted in some instances, in publishing the pedigrees, we called attention to the fact that they were not perfect. This is a neglect of the seller, which, while it does not render the cattle either better or worse, for they must be judged of on their own merits, yet it is important to the breeder who has laid the foundation of a herd, and which, in after time, when it would probably be difficult to amend, would cause much annoyance and loss, as throwing a shade of doubt on the descent of the animal from imported stock

only. There is another reason: the pedigree stating the descent to be pure, or direct from animals all known to be meritorious as possessing in an eminent degree the qualities for which the Shorthorn breed is remarkable, renders the breeder surer as to the quality of the animals he breeds. If there is uncertainty in the descent and by some means a cross of the native or other breeds has been made, the breeder cannot be sure how soon he may have his animals breed back, and their progeny possess some points which are not inferior, but which they are likely to perpetuate, if they are bred from. Thus it will be seen that though animals may sometimes show all the points of the pure Shorthorn, in an eminent degree, they may be unfit to breed from, on account of their immediate progenitors being of impure or not altogether of direct descent from animals of the improved Shorthorn blood. Hence, again, another important reason why a pedigree tracing the descent of the animal on both sides to imported stock is insisted upon by breeders, and even in this case there is a certain choice in the imported stock, as those which show the most blood of, or closest relationship to, certain families, are considered of a higher grade than others.

The most of this stock of Mr. Fox, shows careful breeding; his cows, Althea, Beauty, Spot, and Blossom, show many good points, and are good handiers. The younger heifers give promise of making serviceable cows, and will cross advantageously with the Orpheus stock which he has growing up. The bull Fortune, which he brought up from Mr. Goe's herd, is well limbed, low set, long bodied animal, with a good head, fine bone and a very fair depth, and squareness of form for his age. He promises well, but will shortly have to give way to Comet, a white calf from Orpheus and Minnehaha, of great promise, and with many characteristics of his sire. Calamity, a bull from Althea and imported Richard Booth, is an animal that will also make his mark, and be noticed wherever he is shown.

Amongst the stock selected, there are also several French Merino sheep, which were brought up from General Goe's flock. We did not have the opportunity of examining the fleeces of these sheep, as they were mixed in with the flock, which consisted of Spanish and grades. If Mr. Fox wishes to render the French useful, we think he should procure

the French useful, we think he should procure enough to start a small flock, and breed pure bloods only of this variety. The system of crossing the French with grade Spanish has invariably resulted in deteriorating the value of the flocks in this State.

Mr. Fox also brought up a few Essex pigs, and having purchased some pigs from Mr. Tibbets and Mr. Crippen, he will in a short time have a family that ought to prove really an improvement. Those we saw in the pen gave promise of making good pigs, and were growing rapidly enough, if they were to be kept for breeding purposes.

Taken altogether, Mr. Fox has commenced on a large scale, a series of improvements in stocks, in buildings, and in the treatment of his lands, which will do much service to the community of Ionia county, and the progress of which we shall watch with much interest from time to time.

The State Society.

EDITOR MICHIGAN FARMER.—Of what use is a law, unless provision be made for carrying that law into effect? Of what practical utility is the requirement "that the kind and quality of food in feeding the animal, the kind and cost of labor employed, the total expense, and the increase of the value of the animal must be given, before a premium shall be delivered," unless sufficient inducement is held out to elicit these important facts? These are important requirements, and a strict compliance with them should be made the condition upon which premiums are paid.

Our Society pays a premium of \$5.00 every year, "for the best fat hog." No statement is given of "the kind and quality of food, the total expense of feeding," &c., simply, because it will not pay. Hence, this provision of our Constitution, so wise and salutary, becomes a nullity, a dead letter. No effort is made to prepare an animal for exhibition, nor to give this valuable and necessary information; but if one happens to have a fat hog on hand, it is tumbled into the pen, the \$5.00 awarded, the money pocketed, the hog slaughtered, and the public no wiser for the information!

If we rightly understand the object of our Society, it is "to promote the improvement of agriculture and its kindred arts." Whether it is of more consequence to know what it costs to make a pound of pork, or what is the least possible time in which a horse can

be made to trot a mile, we leave others to determine; yet, for the latter information, the Society pay \$20.00, for the former \$5.00.

J. S. TIBBETS.

Livonia, 14th, Feb. 1859.

FARM MISCELLANEA.

An Excellent Crop of Wheat.

EDITOR MICHIGAN FARMER.—Although we hear complaints from almost every part of the United States, about the ravages of the "fly," and the consequent failure of the wheat crop, it is delightful to discover that there are exceptions to the general rule of destruction, and that some of these are to be found very near us. A few days ago, I had some conversation with Mr. Henry Ford of Greenfield, a very intelligent and reliable farmer who owns a threshing machine and "runs" with it through several parts of Wayne County, on inquiry from him what kinds of wheat he considered best to withstand the attacks of the fly, he said that the Mediterranean is by far the best, that he threshed from 15 to 20 bushels per acre of this wheat, when other kinds in the same description of soil did not produce more than five bushels per acre. He said that the crop he saw during his excursions belonged to Mr. Black, the well known dreyer who resides on the banks of the Rouge, from five acres of this crop he threshed 144 bushels of wheat, which makes near 29 bushels per acre. It need scarcely be said that it was the Mediterranean variety.

On making some inquiries relative to Mr. Black's system of management, I learned that he winters a great number of cattle, and from the manure produced by them, he enriches his land and raises excellent crops of grain and roots; he had a splendid crop of corn last fall, which was scarcely surpassed by any in Michigan. When Mr. Black got possession of his farm it was almost worn out by frequent cropping without manure; but he is renovating it by judicious management, and plenty of barn-yard manure. He plows his land deep, gets his crops into the ground in proper time, extirpates all weeds, and raises abundant crops of every kind; and instead of having "nothing to sell," like many of his neighbors, he always has plenty to dispose of whenever a favorable state of the market induces him to open his granary or root-house.

It is well known that thin sickly crops of wheat are always more injured by the fly, than those which are strong and healthy, and it is evident that the ravages of this destroyer will become "small by degrees and beautifully less," according as improved husbandry increases; for deep tillage, the total destruction of weeds, and a judicious rotation of crops will not fail to banish almost all these noxious insects which ruin the farmers, crops especially in those places where a defective system of husbandry invites the predators of the enemy.

EDWARD MASON.

Sorghum Sugar.

D. D. Tooker, of Napoleon, writes us, "since sending in my note on Syrup making, I have found that in about a quarter of a barrel of syrup that was reserved for use, nearly one fourth of the bulk of the syrup has granulated at the bottom of the cask, and has become so thick with sugar, that it will hardly run through an inch faucet. My opinion is that one-half of the syrup would have granulated before spring, if it had been left undisturbed. This seems to indicate that the syrup under certain circumstances will crystallize of itself, if properly made and left undisturbed." These facts are interesting, but do not seem to render it at all certain that the sugar thus produced, was pure cane sugar. Those who have given the sugar of this plant an examination, state that it contains more of the glucose or grape sugar, than of the crystallizable cane sugar, and is therefore more fitted to make syrup than sugar, and that we need not look for a large proportion of the latter.

Ought I to sow Peas that are eaten by bugs?

The pea bug does not destroy the germ of the pea, but it eats the nutritious matter which is laid up in the seed for the nourishment of the young plant, before it has thrown out roots or leaves by which it can gather food from the earth or the atmosphere. The effect of the eating of the pea by the bug is therefore, not to destroy the power of the pea to germinate, but to render the plant weak and dwindling, and very liable to be killed outright by inability on poor badly tilled land to overcome the effect of the robbery committed by the bug. Hence it happens often that one man may sow peas apparently badly eaten up by bugs, and obtain a good crop, and another will obtain no crop at all. The one had either prepared his field so that the weak plants had all the nourishment from the soil they needed, or it was naturally favorable to the growth of the pea, the other had thrown his seed on land that was entirely unfit to raise the crop. Peas should have from a fourth to one-third more quantity used, as the chances are as much as in that proportion, that many of the plants will die off, after the seed has germinated.

NEW ADVERTISEMENTS.

THORP, SMITH & HANCHETT, Syracuse Nurseries.
C. BLOSS & CO., Detroit, ... Seed Store.
M. L. BROOKS, Novi, Bull for sale or to let.

ANSWERS TO CORRESPONDENTS.

D. D. T.—Shall be pleased to receive samples of your syrup, and will give it a trial.

H. G., Armaida.—There is very little appreciable difference between the two varieties of corn. The yellow is considered to contain a rather higher proportion of oleaginous matter. Your question on draining will be answered next week. It is an important one.

H. R. S., Grand Traverse.—The seed can be had at our quoted rates at Penfield's or at the store of C. BLOSS & CO., in this city.

MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.

SATURDAY, FEBRUARY 19, 1859.

Plaster for the Million.

At the meeting of the Agricultural Society of Jackson county in January last, measures were adopted to make inquiries as to whether plaster could be obtained at low rates for the use of farmers. A committee was appointed who conferred with R. N. Rice, Esq., the general Superintendent of the M. C. R. R., and the consequence of that conference was that that gentleman entered upon the consideration of the subject with that practical ability which eminently distinguishes all he does, and the result has been such that we think the whole farming community on the line of the Central Road should be well satisfied.

We met Mr. Rice last Tuesday on his return from Grand Rapids, which he visited for the purpose of completing all the arrangements which he had indicated in connection with Mr. Muir of the Detroit and Milwaukee Railway, and he has furnished us with a copy of the letter of agreement which Messrs. S. Wood & Co., and Messrs. Hovey & Co., who own the principal Plaster works at Grand Rapids have given as to the rates at which Plaster will be forwarded, and which is as follows:

GRAND RAPIDS, Feb. 14, 1859.

R. N. RICE, Esq., Supt. M. C. R. R.
DEAR SIR.—We will deliver Plaster at the Depot of the Detroit & Milwaukee Railroad in this City upon the following terms:

Ground Plaster in sacks at \$3.50 per ton. Sacks to be returned or paid for at 26 cents each.

To parties furnishing their own sacks, \$3.25; in barrels, \$4.75; Plaster in the Rock, \$2.50.

TERMS—Cash on delivery at Depot in Grand Rapids. Our motive in delivering it at these extremely low rates, is to induce a larger consumption of the article by our Farmers, and to introduce it throughout the Western States; and we would here assure the public that these rates shall not be changed during the present year.

Yours, &c., S. WOOD & CO.

The price at Grand Rapids being thus fixed, the rate of freight from Grand Rapids to Detroit has been fixed by the Superintendent of the Detroit and Milwaukee Railway Company at \$2.30 per ton, and a table of rates has been prepared by Mr. Rice, which shows the cost per ton of plaster delivered, ground or unground, at the several stations on the line of the Road, the ground plaster to be delivered in bags belonging to the party who orders, or in bags to be returned to the mills, or in barrels. This table we shall publish next week, but to give our readers in Washtenaw, Jackson and Calhoun some idea of the rates at which this, the best quality of plaster can be furnished in lots of not less than ten tons, we give the following figures taken from it.

Ground plaster in bags belonging to purchasers, can be delivered at any place between Detroit and Dexter, in lots of not less than 10 tons at \$6.05 per ton. The same when in sacks loaned by the seller of the plaster at Grand Rapids, \$6.80 per ton, when put up in barrels \$7.55 per ton.

The rates for the same article under the same provisions delivered at Grass Lake, are \$6.20, \$6.45 and \$7.81.

Delivered at Marshall, \$6.62, \$6.87 and \$8.12.

Delivered at Battle Creek, \$6.75, 7.00 and 8.25.

Delivered at Kalamazoo, \$6.95, \$7.23 and \$8.48.

Or the price of delivery in lots of not less than ten tons, on the Central Railroad, when carried westward will be for the future one cent per ton per mile, a tariff that no reasonable man can object to, as it only pays for the cost of handling and carriage.

The quality of the plaster furnished by the immense beds in the western part of our own State is so superior, that there can be no question of its being the cheapest in the market at these rates, and in thus providing a supply of it at the rates we have mentioned. Mr. Rice has conferred a most inestimable benefit on the interior of the State, the value of which cannot be too highly appreciated. To Jackson county alone, which set the movement on foot, this ability to obtain plaster is

worth many, very many millions of dollars. Her thin soils, and sands, can be made by a judicious application of this manure to yield a vegetation that will sustain many more thousands of the domestic animals than they now do, and instead of weeds choking up her fields of corn using up her soils, and the surface permitted to lie bare and unproductive, half-tilled, and a libel on the state, we hope her farmers will apply themselves with some degree of energy to methods of renovation. The plaster at the above rates affords the means of starting the improvement. Mr. Rice has done his share, for which he ought to have the warmest thanks of the community. Let the farmers themselves appreciate his work, and turn their attention to doing their duty, and we shall hear less about short crops.

The Western Grain Districts.

The Cincinnati *Price Current* gives the following as the result of its correspondence from different sections of the west, on the subject of the amount of grain on hand, and the amount of production of last year's crop, which we all know in many places was a failure:

The complaints regarding the scarcity of corn are general from all sections—even in Tennessee and Kentucky, it is not plenty, but in some parts of those States, particularly in Western Kentucky, complaints are made of a scarcity. In this State, the supply is light, and few willing to sell any until the spring comes, and a fair prospect of food for stock. In many places in Indiana, chiefly those sections where the land is flat, with a clay soil, farmers, in many cases, did not succeed in raising enough to meet their own wants, and are now necessitated to buy at prices ranging from 60 to 80c per bushel, which are the rates current in that State according to locality. On dry rolling soils, the crop was about two thirds an average, but the bottom lands on the lower Wabash, were in many places waste, and it is only here and there any was raised.

In Illinois, except on the bottom lands, there was about five-eights of a crop, as regards yield, but a considerable quantity of bottom land, on the Illinois river, as well as the flat and clay lands produced nothing but weeds. Prices rule from 40 to 75c. per bushel in the interior of that State according to locality. Some farmers had fair crops, and there is also some old corn still on hand, but there is a general indisposition to sell at present, even at the current rates.

In Iowa the supply is moderate, but the failure of other crops in that State makes corn the only available food, and consequently it is carefully economised, and parted with sparingly and reluctantly. The same remarks will apply to Missouri. In Wisconsin the corn crop was short, and the supply is light.

As regards Wheat, we heard no serious complaints of a scarcity from Tennessee, Kentucky, this State, Indiana, or Southern Illinois; all the letters report a fair stock still in farmers hands, but that there was a general indisposition to sell at current rates, 60 to 80c. per bushel, according to locality—the belief being general that \$1 per bushel, and upwards, would be obtained in the spring. The great falling off in receipts at Chicago being regarded as strong indications of high prices.

From Iowa the complaints of a scarcity of wheat are marked and general; the yield in that State is represented as being from four to seven bushels per acre, and the quality very inferior, a great portion of it almost worthless, and not fit for human food. In the northern counties of Illinois this crop proved a bad failure, and very general complaints are made of a scarcity; indeed, spring wheat generally failed, and as a consequence where this is the kind sown, the quantity gathered is not only small but inferior.

We are inclined to believe that, taking the whole west together, the supply of wheat yet to come forward is fair, and with no large foreign demand, there will be ample to meet the home demand, even at moderate prices. There is a large quantity of flour held by millers, who have been anticipating better prices, and this, too, must come on the market sooner or later.

Our letters say that the supply of fat hogs to come forward during the spring and summer will be unusually small, but we find that in some places in Illinois inferior wheat was being fed to them. The probability is that the very expectation that hogs in the spring will be scarce, will lead to extraordinary exertions to feed and take care of them, and thus the supply will be larger than is anticipated.

Potatoes, generally speaking, were not over one-third, as compared with the crop of 1857. Hay a fair crop, and saved in good condition. The Hungarian grass is generally praised, wherever it has been introduced.

As regards the yield of corn, general disappointment is expressed. About the time it was matured, farmers thought the yield would be good, judging by the general appearance of the crop as it stood, but when it was gathered it was discovered that the number of ears on the stalks was less than usual, and the yield, consequently, not as good as had been expected. We alluded to this fact, however, in December, at the time we became satisfied this was so.

J. L. Hurd & Co. are about to commence a direct trade with the West Indies. Hamburg and English ports. They have advertised for twenty vessels to load at an early date, so that they may get out of the St. Lawrence as soon as the ice will permit in the spring.

The State Legislature.

The Legislature adjourned on Monday the 14th instant at twelve o'clock at noon. It is generally admitted that there was less excitement and a better feeling amongst the members than is usual on these occasions.

The bill to make a new county from a part of Wayne, and to alter the boundaries of the city of Detroit, did not pass. A bill was passed, however, providing that each ward should be represented in the board of Supervisors by the two aldermen, which gives the city a majority of the Board. The refusal of the board to make any provision for new county buildings has led to this result. The bill to provide for the erection of a House of Industry at Detroit, was also lost.

The bill for the registry of voters was passed, the provisions of which will be laid before our readers as soon as a copy is published showing in what shape it was passed. This is an important matter, especially to cities.

A joint resolution of both Houses against any increase of Postage was passed.

A bill to provide for the completion of the Geological Survey of the state was passed.

An appropriation of \$25,000 per year, for two years in aid of the State Agricultural Society was passed.

The bill to provide for the maintenance of the Agricultural College was finally passed, providing that \$41,000 should be appropriated for its expenses for the next two years, and to clear off its present debt. The provision for adding to the buildings was stricken out. This we understand was done partly because the appropriation had been made by Congress of lands which if the bill is signed by the President, will give ample means to put the Institution on the most useful footing.

On the last day of the session the Governor sent in the following message, with a bill which we believe was passed, in accordance with its suggestions:

"I herewith enclose to you a letter from Hon. D. S. Walbridge one of the members of Congress from this State together with a copy of a bill lately passed both Houses of Congress, donating a quantity of land to the State of Michigan in aid of Agriculture and Mechanic arts.

I am unable to advise you whether this bill has yet received the signature of the President. Should it become a law, certain legislation on the part of Michigan will become necessary before she could avail herself of its provisions, and I think this Legislation can be done in anticipation of the signature of the President to said bill, thereby obviating the necessity of again calling you together, or of awaiting your next biennial session. I have therefore directed the Attorney-General to prepare the annexed bill accepting of the said grant of land in case the same should be consummated by the signature of the President, and respectfully ask you to pass it before you adjourn.

M. WISNER.

The bill providing for appropriation of the swamp lands to purposes of draining was passed, and under it certain roads are to be made, for the survey and construction of which certain boards of commissioners have been appointed. The names of the several roads, and each board are as follows:

Ionia, Houghton Lake and Mackinac—H. H. Leroy, of Wayne; Guy N. Trowbridge, of Oakland; Sandford A. Yeomans, of Ionia.

Newaygo and Northport—Amasa B. Watson, of Newaygo; Henry Palmer, of Monroe; S. O. Kingsbury, of Kent.

Port Huron, Bay City and Lansing—R. McCrory, of Genesee; Newell Avery, St. Clair; Israel Morey, of Washtenaw.

East Saginaw and Sauble River—Morgan L. Gage, Saginaw; Roland B. C. Newcomb, Lenawee; A. P. Brewer, Macomb.

Lexington and Flint River—S. R. Middleton, Sanilac; John B. Wilson, Lapeer; David Cutler, Hillsdale.

St. Mary's River and Mackinac—W. O. Spaulding, Chippewa; David Clark, Clinton; E. Mudge, Branch.

Ontonagon and State Line—I. Augustus Coburn, Ontonagon; Wm. Wheeler, St. Joseph; C. C. Darling, Ingham.

L'Anse Bay and Wisconsin State Line—D. D. Brockway, Houghton; John McEwen, Bay; N. Fitch, Berrien.

Marquette and Bay D'Noquett—Warren Isham, Marquette; R. M. Wheaton, Eaton; S. S. Bangs, Calhoun.

Allegan, Muskegon and Traverse Bay—J. Andrews, Van Buren; A. H. Long, Cass; Newton Edmunds, Tuscola.

This is a very important measure, and will be referred to again at an early day, as soon as it is better known what the actual provisions of the law are. This measure may be considered one of the most important of the session, which has just adjourned.

The public acts passed in addition to those already named are,

To authorize the Superintendent of Public Instruction to appoint a deputy.

To amend the militia laws;

To designate holidays to be observed in the payment of bills of exchange and promissory notes, and the holding of courts;

To amend limits of circuit court districts;

To organize the county of Muskegon;

To organize the county of Mecosta;

To ascertain the annual cereal productions of the State;

To provide a military fund in aid of the uniformed militia;

To amend the law in relation to commissioners of highways;

To organize the county of Isabella;

To protect game in this State;

To amend sections 2, 3, 6, 7, 8, 9, and 12 of the act to provide for the drainage of swamps, marshes and other lands, and to amend the act by adding thereto sections 20, 21, 22, 23, 24 and 25;

To diminish expenses in Circuit and other courts;

To amend certain sections of the primary school law.

To regulate fire, marine, life and health insurance companies and their agents, associations, partnerships and individuals, doing fire, marine,

life, and health insurance business, not incorporated by the State of Michigan;

To authorize Supervisors and Highway Commissioners to purchase Nathaniel Potter's machine for improving roads;

To encourage the manufacture of salt in the State of Michigan.

To prevent the adulteration of alcoholic liquors, and to punish persons who shall sell or offer to sell adulterated liquors and other adulterated beverages.

To make appropriations for building 160 cells in the east wing of the State Prison and for other purposes, as recommended by the Board of Inspectors in their late annual report;

To authorize the Commissioners of Highways of townships to establish water courses and locate ditches in certain cases.

To require railroad corporations within the State to cut and destroy the noxious weeds which grow on land occupied by them;

To provide for the settlement and drainage of swamp lands by actual settlers.

To authorize the formation of companies for the detection and apprehension of horse thieves and other felons, and defining their powers.

To prevent fishing with seines and every kind of net in certain counties in the State of Michigan.

To provide for the establishment of School District libraries.

There are beside these named, about 250 other acts, relating mostly to local and private matters, or for the amendment of acts now in operation. During the session of forty days, the members not only matured and passed at the rate of eight or nine laws per day, but they also considered nearly as many more bills that did not obtain their approval.

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Literary News.

Lord Broughton is getting ready his notes of "Several visits to Italy" for publication. The erudition of the author must make them much sought after.

Tennyson has his new poem of "King Arthur" ready for publication. Report speaks highly of its merits, but report is a terrible liar sometimes, especially when she deals with celebrities.

Sir William Hamilton's *Lectures on Philosophy* are to be published early the present month.

"Maga" the universal favorite has begun the new year by finishing Bulwer's best work of fiction, "What will he do with it." No three female characters have ever been more beautifully and strongly drawn than the Sophy, Caroline and Arabella, of this magic production; whilst the male opposites, Lion-l, Darrel and Jasper stand out in relief from all the other characters. Soft flowing and musical as the most wondrous harmony has been the current of the story since its beginning, and complete in all its parts. In its polish and finish we note the exquisite skill and genius of the artist, whose nights and days have been spent in study and in rendering himself perfect in his art. We have read the last chapter with regret at being obliged to part with so many in whose fate we had begun to feel a warm interest. Blackwood also contains pages on "Birmah and the Burmese," a cruise on Japanese Waters, a description of the angling facilities of northern Scotland, and other papers literary and political.

The publications of Leonard Scott & Co., afford the cheapest amount of sterling literature to be found in any country, and should be sustained.

The present is the season when subscriptions for Blackwood and the four great Reviews may be made and forwarded. The rates are given on our advertising pages.

Bentley, the London publisher is about

The Household.

"She looketh well to the ways of her household, and setteth not the bread of idleness."—PROVERBS.

EDITED BY MRS. L. B. ADAMS.

RICH THOUGH POOR.

BY A. D. F. RANDOLPH.

No rood of land in all the earth,
No ships upon the sea,
Nor treasures rare, nor gems, nor gold,
Do any keep for me;
As yesterday I wrought for bread,
So must I till to-day;
Yet some are not so rich as I,
Nor I so poor as they.

On yonder tree the sun-light falls,
The robin's on the bough,
Still I can hear merriment note
Than he is warbling now;
He's but an Arab of the sky,
And never lingers long;
But that o'erruns the livelong year
With music and with song.

Come, gather round me, little ones,
And as I sit me down,
With shouts of laughter on me place
A mimic regal crown:
Say, childless King, would I accept
Your arms and domain,
Or e'en your crown, and never feel
These tiny hands again?

There's more of honor in their touch
And blessing unto me,
Than kingdom unto kingdom joined,
Or navies on the sea:
So greater gifts to me are brought
Than Sheba's Queen did bring
To him, who at Jerusalem
Was born to be a King.

Look at my crown and then at yours;
Look in my heart and thine:
How do our jewels now compare—
The earthly and divine?
Hold up your diamonds to the light,
Emerald and amethyst;
They're nothing to these love-lit eyes,
These lips are so often kissed!

Oh! noblest Roman of them all,
That mother good and wise,
Who pointed to her little ones,
The jewels of her eyes.
Four sparkle in my own to-day,
Two deck a sinless brow;
How grow my riches at the thought;
Of those in glory now!

And yet no rood of all the earth,
No ships upon the sea,
Nor treasure rare, nor gold, nor gems
Are safely kept for me:
Yet I am rich—myself a King!
And here is my domain:
Which only God shall take away
To give me back again!

—Knickerbocker.

Where the Money Goes.

One of our agents from the country writes: "I hope money flows in upon you more plentifully from other counties than from this.—With us money is scarce, taxes high, and the heaviest tax of all is the great eastern debt the people owe through the merchants, too much of which is for gewgaws that might better have been dispensed with."

This brings to mind many sayings and incidents of similar import which came under our notice in our travels during the past season. One agent said, "It will be of no use for you to go to such and such a man; he cannot pay you now; he is good for it, but I am sorry to say that the merchants are pressing him hard at present; if he saves his homestead it will be as much as ever he can do; he has a good many girls to dress, and—well, you know it costs something, and payday must come sooner or later."

Another said: "There is scarcely a man of family in our neighborhood who is not harassed to death with store debts, and if they have a pound of butter or a dozen eggs to sell, the merchant gets them at his own price, and they go to apply on account, so you see there is no chance for money to get into the farmers' purses."

A third remarked: "We cannot expect to get up much of a list for the FARMER in our town this year, as the merchants have drained us of every dollar, and where the money for our taxes is coming from is more than one in ten can tell."

This was the burden of complaint by many individuals, and it is the key note to the cry of "no money, no money" which comes up like a universal lamentation from all parts of the country. With so many texts before us, each confirming the other, a good opportunity is given for a sermon on domestic economy, and for taking to task the mothers and daughters who must have been instrumental, in a great measure, in bringing about such a state of things; but no words of ours could add force or point to the facts already stated: the debts are contracted, and the merchant must be paid, that he may in turn pay his eastern creditors, who are pressing him as urgently as he is pressing the luckless ones that are in his debt.

In many cases, perhaps, these "store debts" are the result of a want of forethought on the part of the husband in not providing for family expenses; in others it is carelessness and in others still, downright selfish stinginess. We believe with the "Farmers Wife, of Utica,

whose letter was published in the FARMER for January 8th, that housewives should have an allowance set apart for them in proportion to the general income of the business in which their husbands are engaged, and in proportion also to the number in the family to be clothed and fed, and the style of living they can afford to maintain. Some husbands will never think of giving a dollar to wife or daughter unless teased for it, when they know very well that clothes must be bought, and that they cost money, as they find to their sorrow when pay day comes. No woman with any pride or self-respect wants to be all the time teasing for money and have it doled out to her, a few shillings at a time, and this niggardly spirit on the part of the husband has been the beginning of many a store debt which has swallowed up not only the crops of the farm, but in too many cases the farm itself. For these running accounts run up at an amazing rate, and when the day of settlement comes, everybody wonders what they have bought that could have swelled the amount to such a sum. But let the same family try the cash system for a year and keep their own account of the money spent, and if they do not find the bill running up as fast as before, it will probably be because they learn the value of money and make better use of what is bought. A paper of pins, or of needles, buttons, spools of thread, and a hundred other trifling things, very necessary in a family, seem like small matters to practice economy on, yet let any one try it, and see how much longer they will last when it is understood that each item costs the money down, than when it is run into the general account to be added up at the end of the year. It is very easy to say "charge it,"—two little words that can be said in a breath, and many a woman, and man too, has repeated them daily, perhaps oftener, the year round, thoughtless of consequences till startled by the ominous words "foot the bill," which slips as easily from the merchant's tongue as the "charge it" did from that of the hapless debtor. How many homes, how many farms, how many families have been sacrificed to those two little words, sometimes, as we said, the result of thoughtless improvidence on the part of the husband, which drives the wife and daughters to this only alternative for clothing themselves and procuring the many articles necessary for family use, of which men know little and usually care less, till pay day comes; and sometimes, perhaps, the careless or willful extravagance of women whose vanity must be gratified even if it be at the expense of their husbands' credit and honor.

But far be it from us to lay to woman's charge all the bankruptcies, the mortgages foreclosed, the debts uncancelled, and the terrible money famine which starves business and beggars energy and enterprise. They have had their share in working the mischief, but they have not done it all. Not all the charges in the long account are for calicoes, bonnets, pins and needles; there are pounds of nails which have been as carelessly scattered about the barn or workshop as the pins have about the house, and there are jugs of something besides molasses, and pounds of tobacco, and the coat that was not exactly needed, but fitted so nicely, and the merchant, accommodating man, was so willing to charge it, that, really, it would be throwing away a bargain not to take it, and there are boots and shoes that grow red and wear out for want of care and grease to protect them against the effects of the weather, and tools that are rusting out in the snow and mud, all charged in the bill, all at the highest cash price, and with profit enough added to pay the obliging tradesman for waiting till the year comes round. Altogether it is a ruinous way of trying to get along, and those who practice it more often get along backwards than any other way. It is thought by many that this dreadful ordeal of "hard times" through which we are passing will teach people the salutary lesson of living within their means, a lesson which, if well learned and practised, would soon banish from letters, tongues and newspapers all such complaints as those at the beginning of this article. May that time speedily come.

Home Whispers to Husbands and Wives."

The above is the title of a volume recently published by the American Female Guardian Society, and the proceeds of its sale are to be devoted to the support of their Home for the Friendless. The work is compiled from a series of articles originally written for the *Advocate and Guardian*, by a lady of this State. They are vivid pictures of domestic life, and are drawn with a power which at once forces home the conviction that their counterparts are but two common in the eve-

ryday life around us. Just such husbands and wives may be found in every neighborhood, and we could wish that the truths and suggestions contained in this little book might find their way to every heart in every home where the great harmonizing spirit of mutual sympathy is wanting. The work is for sale by Francis Raymond of this city.

The following extract from the "Introductory to husbands" will show something of the design of the work and the author's style.

"Woman's sphere—her influence—her domestic obligations and duties, have long formed trite themes for many an essay, sermon and tale. How long have the pulpit, the press, the teachings of society and public sentiment, enforced the sacred obligations which rest upon her, to make the homes of men, over which she may preside, Eden retreats from the turmoils and perplexities of man's outer life—retreats, where his soiled and ruffled garment of care and annoyance may be exchanged for the robe of comfort and repose.

How oft, and how feelingly is she reminded that "trifles make the sum of human things," and therefore she should ever be a wakeful sentinel upon the watch-tower of domestic life, guarding from the intrusion of malign and disturbing influences, the sacred hearth-stone.

It is well the daughters of Eve should thus be taught their duty, to soothe man's troubled spirit, to smooth his care-worn brow, and to brighten his rough and toilsome pathway, with those gentle ministrations, heroic forbearances, and that unfailing love and service, which render them "helps meet for him." I will not attempt to add either suggestions or instructions to woman on this worn theme. But, assured that her brother man has been too much overlooked in suggestive hints on domestic education, I would claim his attention to some of those "trifles," which "make the sum of" woman's life, and which carry their influence into the domestic circle no less impressively than those so frequently urged upon her consideration, and which have their own weighty influence in the comforts and discomforts of home. May the whispers, though faint, reach the ear of some husbands, whom custom and teaching have educated to the belief, (even against the suggestions of their better natures,) that the smiles and sympathies, the forbearances, little attentions and services, which should be as golden candlesticks around the home altar, are to emanate exclusively from woman, while they have but to warm and comfort themselves by these cheerful love-lights. Shielded behind the reputation of "good husbands," and in the consciousness of aiming to be such, a suspicion may never have intruded, for a moment, of their merits to the title in its largest and fullest import. House, food, raiment, all the comforts and appliances of life may have been freely and lavishly bestowed, and yet what is more prized by true womanhood, withheld, namely, sympathy, attention, consideration, in life's daily wearying cares and duties, and in its smaller trials. Start not in disgust lest it be asked of you to concede to her an untried and unwomanly sphere of action, or to relinquish to her the scepter of legal and social supremacy, which, amid the agitations and conventions of the day, you now grasp so feebly. Let other pens plead for woman the impracticable, the visionary, the ambitious—the extension of her sphere, and the augmentation of her duties and burthens. Be mine the humbler task of asking a lightening of her toils, some mitigation of her cares, more economy in the draughts made upon her strength and nervous energy, the outpouring of sustaining sympathy and considerate help in her multifarious, wearing and exhausting duties. My plea is for woman—as housekeeper, mother, wife, nurse and teacher; for her who is the mainspring in the home machinery—whose morning labors press hard upon the footsteps of noonday toil—whose nameless cares accumulate as the shadows of evening invite man to repose—refreshment for her whose it is to respond to the multifarious demands of home and hospitality, of children and society—who keeps midnight vigils with restless and sickly childhood, while "nature's sweet restorer" is renovating man's muscles and nerves for less onerous duties. I would plead for frail, sickly, care-worn mothers, who, all over the length and breadth of our country, are yearly dropping by thousands silently, mournfully, into premature graves, ere the first flush of maturity has passed from their brows—and I would whisper this plea in his ear, who is oftentimes slow to learn her value, but in the bitter experience of her loss, when his motherless ones call in vain for her ministrations, and he mourns in bitterness that those priceless services and energies were no more carefully husbanded.

The great Hungarian orator says, "The petty pangs of small daily cares have often bent the character of man." Thrice often have they that of woman, and bent her form, and robbed her cheeks of their youthful bloom before life's noon-tide, and her spirits of their freshness, and her heart of its ardor. Far more wronged has she been by man's inaptitude to sympathy, and his inattention to the real wants of her nature, and to what he may deem little things, than by a denial of co-equality with him in the public walks of life—more crushed by unalleviated cares than by the iron heel of his despotism.

Far be it from the writer to plead for woman an exemption from the toils, earnest labors and stern self-denials of those, who, with faces heaven-ward, tread the checkered and thorny pathway of an earthly pilgrimage.—

But is it the design of Providence that she should be as burthened with the cares of family and children as she is? or that she should so early droop, and fade, and pass away, leaving those cares and burthens to others? Is there not much that is wrong—first in physical training, and next in the exactions and claims of society and family, much neglect and short-sightedness in the family's legal and constituted head? His was a wise policy as well as a thoughtful affection, who every year took his wife from the confinement and cares of a large family, sparing neither pains nor expense to provide temporary caretakers for the little ones, and leaving his large and pressing business, traveled with her to remote and various places of interest, improvement and beauty; cheering, entertaining and drawing out both mind and affections, then returning her to her home, refreshed in body and mind, composed and invigorated in nervous energy, exhilarated and rejuvenated, so that she could perform her life-work more effectually and thoroughly. When asked how he could afford to leave his business, he replied, "I cannot afford to have my wife wear out." When complained of for depriving his children of maternal care, he said, "They had better miss that care a few weeks in the year, than be deprived of it during whole years of a motherless life." All cannot do as he did, but all can emulate his spirit and apply his principles of sound economy in such ways as Providence may place within their reach."

Household Varieties.

Increase of Old Maids.—The Philadelphia Ledger has discovered that there is a heavy increase in the number of old maids, and that the number is augmenting sadly every year. With an increase of old maids of course comes an increase of bachelors; and this last class of persons are much less deserving of sympathy or interest than the first. The causes of this extended life of single blessedness, or of single misery, as fancy or fact may choose to consider it, are mainly attributed to erroneous ideas of living. Many young men have not the courage to meet the expenses of supporting a family, and are often deterred from marriage by a positive apprehension of want.

The fact is apparent in the United States, and still more obvious in Europe, especially among the middle or upper classes. The Ledger thus points out the moral effect of this state of things:

It produces a bad state of society. As for the bachelors, they become corrupt, travel, and die off surprisingly fast; or at least descend into oblivion, their sun soon setting in the great world of fashion and society.

But the hold of the other sex upon society is not as soon lost. Fine girls and well educated young women freeze up by degrees into well preserved old maids, some of the best of them being very handy, very interesting, and very useful, in the little details of society, but sadly insignificant; either pensioned off on little bits of salaries, or more dependent still; and the less interesting portion of them driven to consider every possible art by which a scanty subsistence may be eked out without any derogation from their fancied dignity and station. Invitations for a few weeks are poked for, and means of ingratiating and flattery and gently begging resorted to, that would hardly be credited. All sorts of employments for females, that have any pretensions to respectability, are eagerly sought after at the most pitiful prices; and the paintings and sketches, and drawings and fancy ornaments, from which the dealers realize enormous sums, are really the work of ladies who would not have it dreamed that they touched such things for money. Yet they are glad to do them quietly for prices at which many a washerwoman would hardly sell her time. Every pension and gratuity, every place as governess or companion, is crowded with applicants.

The Young Ladies of Australia.—The young ladies of Australia are in many respects remarkable. At thirteen years of age they have more ribbons, jewels and lovers, than perhaps any other young ladies of the same age in the universe. They prattle—and very insipidly too—from morning till night. They rush to the Botanical Gardens twice a week, to hear the band play, dressed precisely after the frontispiece in the latest reported number of "Le Follett." They wear as much gold chain as the lord mayor in his state robes. As they walk you hear the tinkling of their bunches of charms and nuggets, as if they carried bells on their finger and rings on their toes. Generally the colonial damsels are frivolous, talkative and over-dressed. They have, in brief, all the light unenviable qualities of eastern women. They excell in fineness. A young lady wishing to make a dilatory gentleman, who had been for some time hovering about her, definitely propose, had her boxes packed and placed conspicuously in the hall

of her father's house, thus labelled: "Miss P. Jackson passenger by the 'Archimedian Screw' for England." "If that does not bring him to book," she was heard to declare to her mother, "I'll get Fred to thrash him!" That is an incident for a comedy.

A Reminiscence of Paul Jones.—A Scotch paper says that Mrs. Peckie, a widow, recently died at Pathead, near Kirkcaldy. She was known to have been the last of those young lasses who lighted the fires in Ravenscraig Castle when the men of Pathead kept armed watch and ward nightly for the return of Paul Jones. She was 27 years single, 44 years married, and 28 years a widow, and was in the habit of saying that she had lived three lifetimes. Her offspring was as follows:—9 children, 65 grandchildren, 116 great grandchildren, and three great great-grandchildren—in all, 198.

Easter.—It will be interesting to learn that Easter Sunday, which will be on the 25th of April this year, last fell on that day in 1791, and will not fall on the same date again till 2011. Since the introduction of the Georgian Almanac this has been the case in the years 1639, 1707 and 1791. The period in which Easter can fall, reaches from the 22d of March (earliest date) to the 35th of April (latest date), leaving thirty-five different days for the celebration of this festival. In this year Easter will fall only once (1886) on the latest date, the 25th of April.

The correspondent of the N. Y. Post writing from Paris states that the first grand reception and court ball has been given at the palace of the Tuilleries, and that this ball generally sets the fashions for the year to the rest of the world. No subject being of greater importance than the increase or decrease of crinoline, the circumference of the dresses of the ladies present was watched with extraordinary anxiety by the fashionables present, and to the great satisfaction of the milliners and dry goods dealers, it was remarked that the circumference of the ladies' toilettes had not diminished; if there was any change since last winter, it was on the side of augmentation. It was also remarked that there was a greater profusion of precious stones, especially of rubies, which seem to be coming into fashion again. We will soon arrive at that point where a woman will not be well dressed unless she carries a quarter of a million francs on her shoulders.

Cultivation of the Voice.—The relative strength or weakness of the voice depends partly on the capacity of the lungs, and the general condition of the vocal apparatus, and partly on the number of muscles thrown into action. Experience has also proved that the respiratory organs and the vocal muscles are not only as susceptible of a high degree of development as other portions of our frame, but even to a higher degree. The cultivation of the voice is, however, required on grounds altogether irrespective of the art of singing or public speaking. It is indirectly, perhaps, the most important branch of physical education; for the amount of vital power depends chiefly on the health and vigor of the respiratory process, the regulation of which must be the first step in the cultivation of the voice.

Parents are not generally aware how much might be effected by a proper mode of physical training in those constitutions where the chest is narrow, indicating a predisposition to disease. In all such cases regularly repeated deep inspirations are of paramount value. On account of the elasticity of all the parts concerned, the expansion of the chest in early childhood is easily effected; the capacity of the lungs increased, and the tendency to disease is counteracted.

There should be a sufficient pause between the acts of inspiration and expiration. In order that children should perform these chest-exercises slowly, regularly, and effectually, they require to be carefully watched, guided, and encouraged; for they soon get tired of them when left to themselves. Even adults will derive considerable benefit if, immediately on rising, they regularly, for some time, take deep inspirations, in order that the whole of the lungs may be properly inflated; and then retain the breath as long as possible. The body must be in an erect position, and the shoulders thrown back. It may also be observed that these exercises are best performed in the open air, or, at least, in a well-ventilated room, the windows being open for the time.

Mrs. Helen Markham Wheeler is lecturing to the citizens of Chicago on Anatomy and Physiology.

Household Recipes.

Sausages and Sausage Meat.

The New Jersey Farmer gives the following as the method of a house keeper for a number of years to make and preserve sausage meat of the finest flavor:

"Pass your meat (without freezing) through your meat cutter, put it into a kettle and place it on a stove or over a moderate fire. Stir it thoroughly, being careful not to let it cook or burn on the bottom, while another person adds the following: For 10 lbs. of meat, 3 large tablespoons of salt; 5 of sage; 2 of summer savory; 2 of black pepper; 1 teaspoonful of saltpetre, pulverized or dissolved; 1 lb. of sugar. Stir until the seasoning is thoroughly incorporated with the meat; then pack in deep earthen dishes or tin pans. Set away to cool. The next day, or soon after, warm lard so that it will spread with a case knife, and make a coating over the meat and it will keep any reasonable length of time fresh and sweet. Should you wish to preserve any until warm weather, take fine brown paper, cut it little larger than the surface of your dish, wet it on one side with the white of an egg, lay it on egg side down, pressing it gently with the hand, letting the edge come over the edge of the dish, which will soon adhere and exclude all air. Keep it in a cool, dry place."

Pie Plant.

Let every family that have a rod or two of spare ground aside from their door yard, procure and set the coming spring a sufficient number of pie plants to supply them with that kind of sauce. My word for it they will not repent the deed. I have lived in this State twenty-eight years and never knew the real worth of the pie plant until within two years. Try it my friends. W. B.

A Paradiacal Story.
Continued.

"How fortunate!" I involuntary exclaimed; the two undecided rival fingers simultaneously springing to the stiffest perpendicular, with an imaginary Miss Brighton bowing in complacent triumph from the tip of the one, and the left-handed milliner with a discomfited look, but stiff as her pedestal, on the other. "What is fortunate?" asked Mrs. McCleanly, with something of amazement in her countenance, and darting questioning looks from her black eyes at my fingers.

"I was thinking," said I, "how many guests you would have at your party."

"Ah," said she, withdrawing her eyes from my hands, which, being now relieved from their task, lay quietly folded in my lap; "there will not be over twenty, I presume."

"Twenty! indeed, I counted but eight!"

"Eight ladies; you forget that some of them have husbands, and besides, there are two or three young gentlemen who belong to our class."

It was now my turn to say "ah," and I said it.

Mr. and Mrs. McCleanly were a very peculiar couple. I have said he was the leading lawyer of the place, and so he was; a little, wiry, sprightly, grey-eyed man, as ready to lead his neighbors into traps, as he was to take fees for getting them out again; and doing it all with such artful cunning, and such unfailing success in the end, that really it seemed as though some clients took a pleasure in being "fleeced," just to see how neatly the thing could be done. Squire McCleanly was of course always full of business; and if he did chance to sit a half hour in his own house, you could see business filling up one twinkling grey eye, while the other would fall gently shut with a squint of quiet satisfaction as if anticipating the successful closing up of a difficult case. He never interfered with Mrs. McCleanly's ideas relating to their social position, but seemed quite satisfied with her plans; (as he had very good reason to be, seeing how adroitly she managed her cards for his interest; thereby adding also to her own importance and influence.) Mrs. McCleanly was rather tall than otherwise; she was a well-formed woman; her complexion was inclined to be sallow, and she had the blackest of black eyes, and hair to match.—Her face was thin, ridged in the centre, and out upon the middle of the ridge was perched a most unique, determined little apex of a nose. That nose was the exponent of her character, as truly as her husband's eyes were of his. There it sat, the leading feature of her face, very small in itself, but occupying a prominent and commanding position, ready to contract whenever a frown of disapprobation drew up the muscles of her forehead; it was too short to turn up with anything like a sneer, so it only receded a little just as Mrs. McCleanly stepped a little higher up on her dignity when circumstances made it necessary. It was a penetrating, persevering nose, with a most decided cut, or chiselled outline I suppose an artist would say; and always looked as if perfectly conscious that it had a duty to perform. About the lower part of her face the expression was more agreeable, especially when she smiled, though that was not often. I do believe if she could have been coaxed down from that awful height of duty to which her position had elevated her, she would have been a very pleasant, genial, kind-hearted woman; at least, her mouth and chin indicated as much. Her house-keeping was the counterpart of her self. There was abundance of material for comfort, but much less material comfort than might have been anticipated; still the lack was not serious enough to cause any real unhappiness.

On ordinary occasions the house was as still as a tomb, and its tall, pale mistress in her black dress would have passed for a very tolerable ghost in the everlasting parlor twilight; and twilight of the gloomiest kind it was; for by the time the light of day had been riddled through the half-opened crevices of the green shutters, sifted through the close-drawn, purplish-brown moreen hangings, and finally bolted through the white muslin draperies and sparingly sprinkled over a carpet whose prevailing tints were a dark red and a pale green, there was very little of outdoor cheerfulness left in it. There were two objects in keeping the room thus darkened; first, it was genteel; and secondly, Mrs. Rally's boarding house was directly across the street, and there are always prying eyes at boarding houses, eyes and tongues too, to which it is very annoying for exclusive people to be subject. At night, however, when the astral lamp was lighted, and the polished stove diffused a pleasant warmth through the room, the carpet by its dark red glow seemed to add greatly to the warmth and comfort, and altogether it was an agreeable place to spend a winter evening.

The preparations for the party went on very quietly, most of the arrangements being made in the kitchen between Mrs. McCleanly and the hired girl, Hannah; (my semi-invalid condition confining me mostly to the limits of the parlor and dining-room.) In the parlor were two small light stands, occupying opposite corners, and each supporting two tall, colored candles on silver-washed candlesticks; on one stand was a pink candle beside a blue one, on the other a yellow and a green one. Just before the company were expected, I observed that Hannah took away the colored candles, which by the way had never been lighted, and put white star candles in their places. These were soon enlightened as to the part they were expected to perform, and with the aid of the astral lamp, which was made to shun its brightest, they really made the room quite brilliant.

Mrs. McCleanly's shining black hair was set off by a showy head-dress of lace and pink ribbons; her black silk dress, open in front, displayed an elaborately worked chemise, fastened at the throat by a knot of pink ribbon, which, with her dressy cap, gave her quite a youthful look. Had it not been for the uncompromising dignity seated on her forehead, the determined set of the nose, and the hard lines which habit and nature had drawn around her mouth, she would, in that becoming dress, have passed for a very good looking woman.

The company began to arrive early; the favorite minister and his wife, Mr. and Mrs. Standish came first. He was, as I had anticipated, a thin, dark man, very formal, but with rather agreeable in conversation; his wife was but another edition of himself with only this difference, that he was a doctrinal book bound in cloth, she, ditto, in muslin. Nothing could exceed Mrs. McCleanly's gracious reception of her reverend guests. She was glad they had come first; it was pleasant to be longest with those whose society we valued most, she hoped they would endeavor to enjoy themselves, though some whom she had felt it her duty to invite, were not altogether such as she would have chosen had she been so selfish as to consult only her own wishes. She mentioned this to them confidentially, feeling that she owed it to them to say as much, and knowing that they would understand and appreciate her motives. Indeed they would, was the kind reply; the good of society often demanded personal sacrifices on the part of influential members, and it was the duty of all christians to consult general, rather than private interests.

"Have you heard yet where that Miss Brighton is from, and how long she intends staying here?" asked Mrs. McCleanly, unable longer to repress her anxiety.

"I have discovered nothing except that she and Mrs. Golding were once school-mates; that her parents died a year or two ago, and that she has come here to spend some time with her old acquaintance," said Mrs. Standish.

"There was a rumor"—began Mrs. McCleanly, but before she could say what the rumor was, Dr. Minnett and his wife and Miss Graves came in, and were followed almost immediately by Mr. and Mrs. Hardy; scarcely were they seated before three young gentlemen entered and were severally introduced as Mr. Bailey, Mr. Allison and Mr. Hendricks; all well dressed, fine looking young men, the latter, only, affecting anything like foppery in dress or manners. Both he and Mr. Bailey were in the mercantile business, and Mr. Allison was a young practitioner at law, formerly a student in Squire McCleanly's office, and now his partner. He had a noble forehead, expressive, clear blue eyes whose glances, quick as thought, went round the room, and then constantly turned with restless impatience towards the door. Very soon Mr. and Mrs. Kneeland, accompanied by Mr. Golding and his wife and Miss Brighton were ushered into the room. In a moment it was plain to be seen what Allison's eyes had been searching for. In Miss Brighton's presence there was a beaming joyousness in his look and in the whole expression of his face that it gave one pleasure to see. And what a noble-looking girl she was! stately as a queen, but with a gentle, quiet manner that took away all appearance of haughtiness. Her dark brown, glossy hair was parted smoothly back, and there was about her forehead and eyes a serene and thoughtful look that might have been mistaken for melancholy but for the warm glow on her cheeks and the animating smiles that seemed such ready and willing attendants on her ripe red lips. Her dress was of rich material, faultless in fit and style, but without ornament of any kind. Her conversation was like herself, calm and thoughtful, but of a cheerful and healthy tone. Her mind, person and dress were in perfect keeping, and altogether she seemed a most lovely and

lovable woman. Of quite another style of beauty was her friend, the pretty little Mrs. Golding. She was almost a dwarf in size, but well proportioned for her height, and beautiful as a doll, with her blue, glancing eyes, and the soft brown curls falling about her girlish face. Her wide lace sleeves were looped above the elbows, showing the vivid contrast between the snow white arms and the jet bracelets which encircled them. A plain gold circlet on the "wedding finger" was all the jewelry she wore. She was sprightly, playful and intelligent in conversation as in manner; and her husband watched her with worshiping eyes all the evening.

Mr. and Mrs. Hardy must be described together; they came in together, they sat down together, they talked together, they went out to tea together, they promenaded together and at last went away together. They were a quiet, earnest, busy-looking little couple, who had no eyes nor ears nor tongue but for each other. There was no doubt about it; they were both pulling the same way in the matrimonial yoke, steadily, evenly, and happily.

Dr. Minnett and his wife were, in a social point of view, as well as in size and appearance, quite the antipodes of this "happy pair." Life was evidently no silent study, or moody dream or scene of selfish exclusivism to them. Their broad, joyous faces were bright with animating smiles and communicative good-humor. Light and cheerfulness came into the room with them and were diffused through the atmosphere which surrounded them like the warmth of summer sunshine.—Miss Graves was a pale slender girl, without the slightest resemblance to her sister, the plump and rosy-faced Mrs. Minnett; and both were totally unlike what I had conceived, would be the personal appearance of the ex-school teachers. The one was a fair, florid and rather portly matron of perhaps forty-five; and the other, pale and languid enough to have been a poetess, could scarcely have numbered her twentieth summer. Miss Graves' character seemed tinged with sombre sort of melancholy sentimentalism as an offset to the cheerful gaiety of her sister.

I had caught sight of these peculiarities of the different guests while the passing introductions and greetings and seatings were going on, and was contemplating the expansive forehead and eloquent eyes of the broad-shouldered Mr. Kneeland, quite forgetful that all the expected company had not arrived, when the door was softly opened by Hannah and a mass of silks, flounces, ribbons and frizzed curls attached to a human form came slowly moving in.

"Ah, Miss Dressmore!" exclaimed Mrs. McCleanly, rising and taking a graciously extended white gloved left hand in hers; "I am glad to see you; it was getting so late I feared you were not coming."

"Indeed! I thought it was quite early," said the flounced lady in a voice somewhere between a whisper and a squeal. The usual salutations with each individual present were ceremoniously performed in the same tone of voice, and with a dignity of manner peculiarly Miss Dressmore's own; after which Mrs. McCleanly managed to introduce a chair between the two occupied by Miss Brighton and Mr. Allison, who, seated at a distance of a few feet apart, had commenced a lively conversation, and into this chair she wedged her favorite; Miss Dressmore's flounces, as she spread her skirts and sailed into the appointed haven, actually overspreading half of Miss Brighton's lap, and enveloping Mr. Allison's knee in most unwanted drapery.

"La! Mr. Allison," said the lady, settling the flounces on either side into graceful folds around her own feet, "where do you keep yourself? It is an age since I saw you; and you look pale, are you not well?" and she pushed the frizzed curls higher up to make the most of her low skinny forehead.

Mr. Allison protested that his health was never better, and said he was happy to see Miss Dressmore looking so well, and in such good spirits. He looked as though he would have felt quite as happy had she been a hundred miles away; for while she was endeavoring with the utmost amiability and in the most confidential manner to entertain him with an account of her health and her business prosperity, Mr. Hendricks planted himself on the other side of Miss Brighton and began talking in a low animated tone which seemed to annoy Allison exceedingly, as only the murmur and not the words entered his ear blended with the piercing screech of the indefatigable little voice beside him. He would have been more at his ease had he known that Mr. Hendricks was only enlightening Miss Brighton on the state of the weather during the past week, and prophesying several snow storms in prospect or as very likely to occur in the course of the winter; and still less would he have felt the annoy-

ance had he known that the arch smiles dimpling the corners of Isabel Brighton's sweet mouth and lighting up her expressive eyes, were caused by the ludicrous position in which she found herself placed, pretending to listen to the sage remarks of young Hendricks, and hearing only the shrill whisper of Miss Dressmore.

Mr. Bailey was entertaining me with an enumeration of the great advantages for trade possessed by a village situated as West Paradise was, when Dr. Minnett, who had been carrying on a spirited warfare of words with Mrs. Golding, but all the time watching the Allison party sideways, and seeing the irritated expression on the young lawyer's face deepening into actual suffering, suddenly sprang from his chair, laughing, and declaring that for something Mrs. Golding had said he would be revenged by selecting some other partner than herself for the promenade which he now proposed to the company to vary the evening's amusements. Stepping briskly up to Miss Dressmore, and with a sly smile begging Mr. Allison's pardon for robbing him of such a companion, he placed the milliner's white-gloved hand upon his arm, and with a triumphant glance over his shoulder at the jeweller's little wife, he led off the promenade.

"I will be even with you," said his petite enemy, laughing, and shaking her finger at him; "my husband shall promenade with Mrs. Minnett, and I will put myself under good Mr. Kneeland's wing. What will you say to that?"

"Capital!" exclaimed the Doctor; and the whole company soon paired off and marched with measured steps and much merry talkling up and down the rather limited length of the little parlor. The frequent turns gave Miss Dressmore ample opportunity to enjoy the music most delightful to her ears, the rustling of her five-flounced gros-de-Naples silk. Miss Brighton walked with Mr. Hendricks, but without taking his arm; Mr. Bailey and I followed them, and behind us came young Allison and Mrs. Kneeland; the Hardys were inseparable in the promenade as elsewhere, the Rev. Mr. Standish resigned his wife to Mr. McCleanly, while he solemnly led Miss Graves in the rear, thus completing the circle, for by the time all were on the floor and in motion, Miss Dressmore's flounces came in contact with the skirts of the Reverend Mr. Standish's coat at every turn. Mrs. McCleanly, meantime, meantime had gone out to the kitchen to see that preparations for supper were progressing in proper order. Lumbocro as it seemed at first to attempt a promenade in such prescribed limits, the manuever resulted most satisfactorily to those for whose benefit it was intended.

Dr. Minnett in his good-humored, half-jesting way, quite out-generalled the "leader of society," artful manager as she was, and to that lady's evident dissatisfaction contrived to monopolize the company of her favorite during the greater part of the evening.

(To be continued.)

For our Young Friends.

Poetical Enigma.

Returning from town with a ponderous load,
I chance to fall ill on the way;
But lucky for me—I met on the road
My friend,—the Doctor from A!

He drew forth a vial and gave me a dose,
Of something to cool when diseases inflame;
And I instantly saw that the potion he gave
Was equal to a compound of my load and his name!

Now tell me, you who in learning are skilled,
What prescription did I take from his locker?

With what article was my wagon filled?

And what is the name of the Doctor? J. W. E.

Portsmouth, 8th Feb. 1859.

Solution to Charade of Feb. 5th.

My first—CAR.

My next—BON.

From Bon Bon—French candy,

Carbon is charcoal—used for fuel,

I contain a prize—Carbon in its finest state

contains the diamond.

Cut off my head and transpose,—we find

Baron, in law, means Husband, Lord,

Or Peer—the answer is CARBON.

J. W. E.

Answer to Geographical Enigma in last number

MAJOR GENERAL ISRAEL PUTNAM.

Answer to Horticultural Enigma in last number

DEARBORN'S SEEDLING.

GROVER & BAKER'S
CELEBRATED

FAMILY SEWING MACHINES,
495 Broadway, New York.
143 Jefferson Avenue, Detroit.
58 West Fourth Street, Cincinnati.

A NEW STYLE—PRICE \$50.

This machine sews from two spools, as purchased from the store, requiring no rewinding of thread; it Hem, Fells, Gather, and Stitches in a superior style, finishing each seam by its own operation, without recourse to the hand-needle, as is required by other machines. It will do better and cheaper sewing than a seamstress can, even if she works for one cent an hour. Send for a Circular.

SEEDS! SEEDS!!

OUR Descriptive Priced Catalogue of Vegetable and Agricultural Seeds for 1859 is now ready for mailing to applicants enclosing one cent stamp.

J. M. THORNBURN & CO.

Seed Warehouse, 15 John-st. New York.
N. B. A Catalogue of Tree and Shrub Seeds will be published shortly and mailed as above, containing directions for managing evergreen seeds, &c.

6-8w

3,000 VERBENAS!!!

THE following varieties, and many others not enumerated, can be supplied during the season, forming an unrivaled collection:—

- *Charles Dickens, (Edmond's) Rosy lilac, dark centre, large eye.
- *Lady Grindal, Soft rosy crimson, fine truss and form.
- Lady Pauson, (Edmond's) Delicate pale blue, large white centre, large truss.
- *King of Scots, (Edmond's), Deep crimson, dark centre, very large truss and flowers.
- Black Prince, Very dark purple, large and fine.
- Mrs. Woodriff, Large waxy, white truss, extra.
- *Imperatrice Elizabeth, (Pulchella Monetta), a distinct species, with elegant lacinated foliage; color, violet rose, with pure white flakes down each side of the petals.
- *Brilliant de Vaise, Shaded crimson, large and fine.
- *Violetta, Soft pink, slightly striped.
- Mrs. H. Williams, Very pink, white.
- *Chester, Dark purple, large truss, fine.
- *Madame Viard, Light and dark pink, striped.
- *Incomparable, Light and dark purple, striped.
- *Striped Eclipse, Striped pink, very fine.
- *Queen of Purples, Fine dark purple.
- *Reine de Jours, White, large truss, excellent.
- *Kirste Defence, Color light, pink centre, extra large bloom and truss.
- *Anacore, Very fine scarlet, distinct variety.
- *Robinson's Defence, Brilliant scarlet.

The above twenty varieties form a very choice selection, price 12c. each, for strong plants in Pots. For an assortment, \$1.25 per dozen, or upon receipt of \$2, four more varieties will be added, or selected, making twenty-four varieties equal to any in cultivation.

They will be packed in moss, each plant distinctly labeled, (without the pots) and delivered, at the Express Office or R. R. Depots, in Detroit, at the same price, or send by mail free of postage for \$1.50 per dozen.

Those marked thus * supplied at \$8, per hundred.

All orders should contain a remittance.

Also the following varieties, will be added to the above list after April 15th, at 15c. each plant: Celestial, Attraction, Dahlia, Giant of Battles, Madam Plantagenet, Prince of Wales, Drift, Tranby, Wonderful, Victory, Rosy Gem, La Stelle, Sarah.

The best old varieties supplied at 10c. each, \$1, per dozen; \$6 per hundred.

A choice collection of Dahlias, among them first the prize Dahlia at the State Fair in October last, in Detroit, which will be ready to send out in April and May, price 25c. each; \$2 per dozen; \$12.50 per hundred. Wilson's Albany Seedling and Hooker's Scudding Strawberry. Concord, Delaware, Diana, Logan, and Rebeca. Grape vines.

FRUIT, ORNAMENTAL and DECIDUOUS TREES.

10,000 Norway Spruce and a large assortment of all the hardy varieties of Evergreens, 50 choice varieties of hardy ever blooming Roses.

Greenhouse Plants—Bulbous roots, bedding plants, celery, Tomato, and cabbage plants in the proper season. For sale at reduced prices, all orders promptly executed, and articles packed to bear transportation any distance.

Address, HUBBARD & DAVIS,
Box 266, P. O., Detroit, Mich.

TREES FOR SHELTER
ON THE
PRAIRIES.

WE solicit the attention of Orchardists, Nurserymen and Farmers in the Prairies regions of the West to our immense stock of

NORWAY SPRUCE.

The most hardy, rapid growing and beautiful Evergreen tree and the best adapted for forming belts and screen in the protection of gardens, orchards and dwellings in all exposed situations.

Our stock embraces all sizes from one to six feet in height, frequently transplanted and fitted for safe removal.

Priced lists for next spring furnished on application and the following catalogues are sent gratis, prepaid, to all who apply and enclose one stamp for each.

No. 1.—Descriptive Catalogue of Fruits.

No. 2

MICHIGAN FARMER.
R. F. JOHNSTONE, EDITOR.
Publication Office, 130 Jefferson Avenue,
DETROIT, MICHIGAN.

THE MARKETS.

The market for breadstuffs is quiet at the east and without any appreciable change. Besides at present the New York quotations do not influence our rates. The arrival of the steamers, of which there have been two since our last issue, seems to indicate rather more firmness in the English markets. But there could be little alteration there for the worse, as prices are so low that whenever there is any alteration it must be for the better, so far as producers are concerned. The report of Richardson, Spence & Co., by the America, and bearing date Jan. 29, reads thus:

"Flour dull but steady; quotations, however, were nominal. Western canal 19s2d; Philadelphia and Baltimore 20s2d; Ohio 21s2d. Wheat dull at 24d decline; western red 4s 10; southern red 6s 4; white western 6s 6; white southern 7s 6. Corn dull, and quotations barely maintained; mixed and yellow 2s2d; white 3s 6d.

The telegraph report of the Prince Albert, which is seven days later, does not alter these rates, but states that a firmer feeling was prevalent.

The market in the west seems also to be firm but not quite so high as ours. In Buffalo good to choice brands of extra Michigan have been selling at \$5.50 to \$6.50, and red wheat at \$1.30.

In Chicago, the *Commercial Express* states that "Flour is if anything firmer and more active than a week ago. Wheat suffered quite a depression after the last review, and is now drooping; corn moves steadily upward, having advanced fully 3¢ on the week; oats, barley and rye in active demand and all better; seeds dull and rather drooping; beans advanced but potatoes dull and unchanged; higwhines still tending upward though not yet actually buoyant; all pork products higher, the advance being \$1 on dressed hogs, 50¢ on meat pork and 4s 1d on cut meats and lard; hides firm at 3s 4d a large range of prices, and pelts more active."

Here the prices have fluctuated but slightly during the week. Flour appears to be steady, and is not influenced by other markets, which have not come up to the rates given here. Good parcels of red wheat flour have sold at \$6.87 1/2, and some small lots of extra have been sold to the retail trade at \$6.50 and \$6.75; very extra fine lots range from \$6.50 to \$7.00.

Wheat is steady and without change, there being but few parcels offering from any quarter. Indeed many seem to think that there is less of a supply in the State, than is generally supposed, but the fact is that those who have been able to keep their wheat till this time can afford to hold on till spring opens the navigation, and are willing to take the risk, they think they can afford to do so as well as the commission merchants, and we think so too. Several small lots have been purchased at the mills and stored at \$1.35 to \$1.45.

Corn rises as the spring approaches, and we note sales at 7¢ cents from store. This but five or six cents below the price now given in New York where it is dull and nominal at 8s to 8s 1/2 cents.

Oats are hardly payable, as they seem to have gone out of the market altogether; but the price may be set down at 5s cents for good parcels. They bring this price in Chicago, so that we may look soon to see them at 60 cents.

Barley has not been offered the past week. Some small lots have brought \$1.70, and the quotable rates are from \$1.60 to \$1.80 per 100 lbs.

There have been several sales of wool in this market to the amount of 16,000 or 20,000 pounds, which came from Pontiac, Mount Clemens, Grand Blanc, and Ann Arbor, but mostly all on private terms. So far as we can learn, however, the highest rate has been little, if any, over 48 cents; there may have been cases where half or a quarter of a cent more has been given, on the principal of "give and take," but the rate appears to be steady at 48 cents for the best lots. There is more pulled wool coming forward now than there has been, as the sheep that are slaughtered have more heavy fleeces. There is at present little to note in the eastern wool market. The N. Y. *Economist* makes the following comments in its latest issue:

"With the dealers, the demand has been very active since our last, and the sales made large and at full and even better prices. The stock is mostly all in second hands, and manufacturers are purchasing from them as they can obtain better selections. We understand that the stock in second hands of fleece is nearly 400,000 lbs. This looks large but is not so, so well we know of one party that holds nearly 250,000 lbs mostly fine fleece, which is kept from the market. Though the sales have been large we are unable to give the full particulars, and omit them. They are mostly however of fleece and pulled."

The market is quiet here, and good fat cattle are offering more freely than they were expected. The approach of Washington's birth day is stirring up the butchers to make a show, and we have to call attention to several fine lots of cattle and sheep.

Mark Flanigan has purchased two yoke of cattle, which are considered equal to any thing that has been brought to this market. One yoke was raised and fattened by Pomeroy Stiles, of West Bloomfield, Oakland county, weight 4,500 pounds; the other was raised by Solomon Close, of Pontiac. Both these yoke of cattle were brought here by H. H. Windele, Pontiac, and sold at very high rates, something over 6 cents per pound gross weight. Mr. Flanigan has also on hand 20 head of sheep that average each \$7.00 a piece; they are very choice mutton, and were picked up among the Oakland farmers, and are not of the flock of any one farmer.

Wm. Smith has purchased a farmer of Dearborn, whose name we don't know, and is not of much account, as he does not take the *MICHIGAN FARMER*, a pair of cattle that are said to weigh 5,000 pounds. For these Smith pays \$300, which would make them come at just 6 cents per pound. He also bought some very good sheep that will dress 50 pounds each at \$4.00 per head.

In the street good beef sells at an average of 5 cents per side. Carcasses of mutton sell at 4 and 4s 1/2 cents, and are plenty.

The Telegraph from New York of this week is rather encouraging, and indicates a better state of the market than could reasonably be expected:

There has been this week quite a decrease in the receipts of beef cattle, and a consequent advance of half a cent. Quotations 7s 11/2¢ for superior to best qualities, and 13s for premium cattle; receipts 2,500. Sheep quite active, price ranging from \$4 to \$9; some very extra fat, 15s; receipts 1,000. Sheep very scarce, and selling at 6s 11/2¢ per gross; receipts 6,000.

The dressed hogs now coming in are generally small, and rather inferior. Two or three wagons with a few carcasses were in market, and their owners generally asked 7.25 in the street. The price of corn forbids any longer feeding, so we need not look for many more large heavy hogs to come in.

Mill feed continues steady and high priced, without change.

Seeds are slightly advanced. Clover selling in small lots at \$6.00 to \$6.12 1/2¢, with a good deal of inquiry. The Cincinnati and Pittsburgh trade has affected our market very materially since the first of January, and there has been a steady advance in prices. Timothy remains steady and without change.

Wheat is now selling at a little over 60 cents. Farmers who come in with wagon loads ask 70 cents, but we have not yet heard of any sales at this price.

Beans are selling now at \$1.00 per bushel, to 1.25 for the best quality.

Butter is rather firm at our prices, and during the last ten days there has been some demand for the western trade, which lessens the supply here.

Eggs a little more plenty, but remain about the same in price, selling at 17 and 18 cents per dozen.

Poultry is steady, and somewhat firm, but without any change since last week.



FOR SALE
AT THE
AMERICAN SEED STORE
22 Monroe Avenue, Detroit, Mich.

PEABODY'S PROLIFIC CORN!

A NEW VARIETY.

It grows from three to ten ears on a stalk. Six ears planted by John W. Shaw, last year, produced one hundred bushels of sound corn. This Corn was originated by a careful scientific cultivator on Long Island. It comes up stout and is more robust than common corn. Plant two kernels in a hill, four feet apart each way.

PRICE—Fifty cents per quart, or Fifteen cents per ear.

HUNGARIAN GRASS SEED!

100 BUSHELS FOR SALE.

This justly celebrated Grass Seed has been raised for two years in Iowa and Wisconsin, and to some extent in Illinois and Michigan, the past season. All who have raised it bear testimony to its unprecedented yield. In some cases as high as seven and rarely under four tons to the acre of the healthy and nutritious Grass. It yields from 25 to 40 bushels of seed to the acre, which makes good feed for horses and cattle. They not only eat it with great relish, but it keeps them in a more healthy and better condition than any feed yet tried.

PRICE—\$3 per bushel.

We subjoin the following

Testimonials:

OTTUMWA, IOWA, Jan. 22, 1859.

To whom it may concern:—This is to certify that crops of Hungarian Grass were entered for premiums at our Agricultural Fair last fall, varying from five to over seven tons to the acre of hay, and thirty-seven bushels to the acre of seed, and affidavits were made to the same.—This section of the country was visited by severe drought the fore part of last season, so that the crop of Timothy was scarce and the grasses were not healthy and nutritious.

Grass. It yields from 25 to 40 bushels of seed to the acre, which makes good feed for horses and cattle. They not only eat it with great relish, but it keeps them in a more healthy and better condition than any feed yet tried.

PRICE—\$3 per bushel.

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